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Stuttering in the Movies: Effects on Adolescents' Perceptions of People who Stutter

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STUTTERING IN THE MOVIES: EFFECTS ON ADOLESCENTS' PERCEPTIONS OF PEOPLE WHO STUTTTER

By

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MASTER'S THESIS

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Abstract

This study examined the effects of different portrayals of people who stutter on adolescents' perceptions of people who stutter (PWS). Participants viewed either neutral or negative portrayals of stuttering taken from major motion pictures. Participants completed a bipolar adjective pair scale both before and after viewing either the negative or the neutral video sample. Data was analyzed using between group comparisons (MANOVA) and within group comparisons. Results indicated that the portrayal of stuttering influenced participant perceptions, with those viewing the negative video sample having more negative perceptions of PWS and those viewing the neutral video sample having slightly more positive perceptions of PWS. The gender of the participant did not have an effect on listener perceptions.

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Chapter One

Introduction

People who stutter (PWS) are often perceived more negatively than people who do not stutter (Cooper & Cooper, 1996; Gabel, 2006; Susca & Healey, 2002; Hughes, Gabel, Irani, & Schlagheck, 2010; Langevin, Packman, & Onslow, 2009; Von Tiling, 2011). The negative perceptions held towards PWS are partially based on a perceived set of negative personality traits that are assigned to PWS (Woods & Williams, 1976). As such, one may wonder how the negative perceptions about PWS are shaped and influenced. One variable that may contribute to the formulation of attitudes and deserves investigation is how stuttering is portrayed in entertainment media.

Children spend approximately 25% of their waking hours exposed to television media (Bissel & Hays, 2010). This number increases in adolescence, to nearly 7 hours a day or 43% of the waking day spent being exposed to print, broadcast, and entertainment media (Rideout, Foehr, & Roberts, 2010). In the fields of sociology and psychology, researchers have been investigating how both print and broadcast media influence adolescents' perceptions of beauty and violence (Bissell & Hays, 2010; Groesz, Levine, & Murnen, 2002; Herbozo, Tantleff-Dunn, Gokee-Larose, Thompson, 2004; Martins & Harrison, 2012). Collectively, these studies show that all media exposure- print, broadcast, and entertainment- negatively influenced the development of critical personality traits such as self-esteem, aggression, eating patterns, and self-perception. Groesz, Levine, and Murnen (2002) also found that media influence, specifically on perceived body satisfaction, was greater in adolescent participants, less than 19 years of age, than older participants.

Researchers have also examined how broadcast and entertainment media can provide inaccurate information regarding special populations, such as those with disabilities. For example, Foss (2013) showed that even though hearing loss is a pervasive disorder, it is rarely depicted in television. When hearing loss is depicted, it is falsely represented, as either an immediate loss that can be restored or as a deficit experienced by "the old, decrepit, and vulnerable" (Foss, 2012, p. 1). This suggests that media can shape adolescents' attitudes and perceptions of those with disabilities. Foss's study also indicates that the perceptions formed may not be accurate.

Stuttering has many unique factors accounting for its development and persistence allowing for a continuum of distinctive and individualized presentations (Smith & Kelley, 1997). However, stuttering is still a disorder that most view as transparent, mundane, and simple (Johnson, 2008). A great deal of research has been conducted to determine why misconceptions of stuttering persist by investigating listener perceptions of the speech and personality traits of PWS. Studies focusing on listener perceptions of personality traits have shown that PWS, both real and hypothetical, as well as individuals simulating stuttering, are perceived as more nervous, insincere, unintelligent, incompetent, and uneasy than fluent peers (Gabel, 2006; Susca & Healey, 2002; Von Tiling, 2011). These perceptions may be due to stereotypes held by lay people (Hughes, Gabel, Irani, & Schlagheck, 2010; Langevin, Packman, & Onslow, 2009) and professionals, such as speech-language pathologists (Cooper & Cooper, 1996). However, in contrast to these perceptions, Yairi and Seery (2011) concluded, "evidence has not revealed a specific stuttering personality profile" (p. 128). These findings indicate that PWS are not psychologically different from fluent peers and

have the same personality traits as fluent peers (Bloodstein & Ratner, 2008; Yairi & Seery, 2011). This research suggests that something other than reality is influencing the creation and persistence of stuttering stereotypes, as PWS do not present with personality characteristics different than their fluent peers.

In addition, negative perceptions held by listeners towards PWS have been shown to negatively impact the quality of life of PWS (Craig & Calver, 1991; Hurst & Cooper, 1983; Langevin, Packman, & Onslow, 2009; Van Borsel, Brepoels, & De Coene, 2011). For example, adolescents and young adults perceive their peers who stutter to be less attractive than non-stuttering peers and would be less likely to engage in a romantic relationship (Van Borsel, Brepoels, & De Coene, 2011). Other studies have shown that employers were more likely to hire or promote a person with fluent speech for certain job positions than an employee who stuttered (Craig & Calver, 1991; Hurst & Cooper, 1983).

Adolescents who stutter, in particular, are at risk for a multitude of negative consequences because of the negative perceptions others have towards stuttering. Blood and Blood (2004) found that 43% of adolescents who stuttered experienced bullying at least once during the school week, compared to only 11% of fluent peers. Erickson and Block (2013) found that 53% of adolescents experienced teasing and bullying related to their stuttering. Adolescents who stutter, were also viewed by listeners as more nervous, less attractive, and less social than fluent peers and adults (Borsel, Brepoels, & De Coene, 2011; Hearne, Packman, Onslow, & Quine, 2008; Iverach & Rapee, 2014; Langevin & Prasad, 2012). It has been suggested that difficulties such as anxiety, low self-confidence, and low self-esteem may result from bullying and consequently may affect educational performance (Langevin & Prasad, 2012). Adolescents are also in a period of their lives when they are forming and

maintaining supportive peer groups, and prone to experience loneliness and social isolation (Parker & Asher, 1993). Moreover, it has been proposed that adolescents who stutter may have more difficulties forming strong peer relationships due to high levels of communication apprehension and self-perceived difficulties with communication, which may in turn lead adolescents who stutter to experience feelings of loneliness and social isolation more so than fluent peers (Blood, Blood, Tellis, & Gabel, 2001).

Given that listener attitudes and stereotypes can negatively impact PWS, it is important to identify potential variables that may contribute to the development of these stereotypes. Numerous studies have identified attitudes that exist toward PWS, but fewer studies have shed light on the variables that contribute to the development of attitudes toward PWS. Given previous research showing relationships between media exposure and attitude formation for body image, aggression, and beauty ideals, similar relationships may exist between media exposure and stuttering. Although stuttering has been portrayed in literature, television, and film, limited research has examined the media portrayal of stuttering.

Bushey and Martin (1988) discussed the portrayal of stuttering in children's literature. These researchers suggested that the portrayals of stuttering in the children's literature reviewed were relatively positive and could be useful in clinic settings when trying to promote acceptance of stuttering (Bushey & Martin, 1988). Logan, Mullins, and Jones (2008) also conducted a review of juvenile fiction depicting characters that stuttered. These researchers found more instances of bullying and teasing in the literature reviewed but also came to the conclusion that the books reviewed could be useful in therapy. Johnson (2008) analyzed portrayals of stuttering in entertainment media such as television, comic books, and movies, and concluded that stuttering is one disability that is still "typified by coarse

caricatures" (p. 245) in media to display such traits as humor, nervousness, weakness, or unheroic/villainous personalities. These traits described by Johnson are similar to the negative personality traits many listeners associate with PWS like "nervous", "anxious", "of low intelligence", and "socially withdrawn", shown to be held by many people in several studies (Hughes, Gabel, Irani, & Schlagheck, 2010a, 2010b; Susca & Healey, 2002; Von Tilling, 2011). Recently, portrayals of stuttering in entertainment media have become more realistic. Kuster (2011) discussed the portrayal of stuttering in *The King's Speech* and concluded the film provided a "sympathetic and accurate portrayal of stuttering" (p. 13) that has not been seen in major motion pictures.

Many researchers have demonstrated how adolescents' perceptions are influenced and changed by a multitude of media sources (Bissell & Hays, 2010; Groesz, Levine, & Murnen, 2002; Herbozo, Tantleff-Dunn, Gokee-Larose, Thompson, 2004; Martins & Harrison, 2012; Shibuya, Sakamoto, & Yukawa, 2008). Other studies (Foss, 2013; Stuart, 2006) found that media does not always provide an accurate portrayal of communication and other disorders. This evidence along with the research suggesting that adolescents who stutter may experience lowered grades, social isolation, and anxiety provides the motivation for the current study (Langevin & Prasad, 2012). Research also has not focused specifically on entertainment media's influence on adolescent perceptions of PWS. Therefore the purpose of this study is to determine the impact that entertainment media portrayals of stuttering, specifically those in major motion pictures, have on adolescents' perceptions of the personality traits of PWS. This study will contribute to the current literature regarding listener perceptions of stuttering, but unlike other studies that have examined how stuttering is perceived, this research will examine the possible influence entertainment media from

major motion pictures, may play in creating these perceptions during the developmental period of adolescence. This research will begin to uncover the affects of media on the formation of stereotypical perceptions of stuttering. By contributing to a better understanding of what influences the formation of stereotypes of stuttering, clinicians will be able to better educate students and provide more focused intervention programs to decrease the stigma of stuttering.

Chapter Two

Review of Literature

The American Speech-Language-Hearing Association's Task Force on Terminology defined stuttering as "speech events that contain monosyllabic whole-word repetitions, part-word repetitions, audible sound prolongations, or silent fixations or blockages. These may or may not be accompanied by accessory (secondary) behaviors (i.e., behaviors used to escape and/or avoid these speech events)" (1999, p. 31). Other definitions of stuttering have included cognitive-emotional attributes reported from the speaker's perspective such as, the individual experiencing excessive mental effort (Gutiar, 1998), loss of control (Perkins, 1990), knowing what he or she wants to say (World Health Organization, 1977), and experiencing a change in emotional state (Wingate, 1964).

In 2001, The World Health Organization provided a framework to describe the consequences of a disorder resulting in the International Classification of Functioning, Disability, and Health. This framework examined by Yaruss (2007) acknowledges that all disabilities involve more than the observable impairment and includes contextual factors, such as environmental factors (e.g., support of others, attitudes of society) and personal factors (e.g., affective, behavioral, and cognitive reactions). These contextual factors may include an individual's: satisfaction with his or her speech, self-perception, and participation and involvement in life situations. To understand the entirety of the disorder of stuttering one must consider not only the physical behaviors of stuttering, but also the context in which a PWS is living. This is largely because the way an individual and the environment react to stuttering may influence the level impairment or handicap the individual experiences.

Understanding environmental factors, such as society's attitudes toward stuttering, is central to understanding the effects of listener perceptions on PWS.

Listener Perceptions of Stuttered Speech

Researchers have examined listener perceptions of stuttering for decades (Crowe & Walton, 1981; Craig & Calver, 1991; Erickson & Block, 2013; Evans, Healey, Kawai, & Rowland, 2008; Gabel, 2006; Healey, Gabel, Daniels, & Kawai, 2007; Hurst & Cooper, 1983; Snyder, 2001; Von Tilling, 2011; Woods & Williams, 1976). The results of these studies have provided evidence to support how different listeners (e.g., male vs. female; familiar with PWS vs. unfamiliar; etc.) and variables such as admission of stuttering, enrollment in therapy, severity of stuttering, and age of PWS, can influence how positively or negatively a PWS is viewed. One consistent finding across studies is that listeners reacted more negatively as the severity of stuttering increased (i.e., longer pauses, increased repetitions, and greater tension). It was also noted that, when given the chance to describe stuttering in their own words, listeners tended to use personality traits (e.g., nervous, tense, shy) as well as speech terms (e.g., paused, had trouble getting words out) to describe PWS, not separating the physical traits of the disorder from the intrinsic personality traits of the person (Hughes, Gabel, Irani, & Schlagheck, 2010b).

Many people have preconceived notions regarding the personality traits of PWS, believing that those who stutter are anxious, shy, and/or less intelligent (Johnson, 2008; St. Louis, 2011; Woods & Williams, 1971; Yairi & Williams, 1970). Negative stereotypes typically associated with stuttering are mostly concerned with defining non-speech characteristics, such as the personality traits of PWS, rather than the physical behaviors of

stuttering. Yairi and Williams (1970) studied speech-language pathologists' perceptions and stereotypes of stuttering. One hundred and twenty-seven clinicians returned an open-ended questionnaire that asked the participants to list traits that described hypothetical school-aged male stutterers. Ninety-three non-participant judges then rated the traits on a 7-point scale from "very undesirable" to "very desirable". Results indicated that the most common adjectives used to describe boys who stutter were undesirable traits including "nervous", "shy", "tense", "anxious", "withdrawn", and "quiet". Twenty-three of the twenty-six most common adjectives listed described the personality traits of boys who stutter, not physical structure or mental abilities. Woods and Williams (1971) examined speech clinicians' conceptions of boys and men who stuttered. Forty-five clinicians returned questionnaires in which they listed the traits they believed an adult male who stutters would present with. Clinicians then rated their five most relevant adjectives according to the degree of relevance in describing an adult male who stutters. Results were similar to those found by Yairi and Williams (1970), showing that most traits listed were undesirable and described the hypothetical adult stutterer's personality rather than physical or mental abilities.

Research has shown these negative stereotypes, including negative views of personality traits, intelligence, and abilities of PWS are held by speech language pathologists (Cooper & Cooper, 1996; Snyder, 2001; Woods & Williams, 1971; Yairi & Williams, 1970), employers (Craig & Calver, 1991; Hurst & Cooper, 1983) teachers (Crowe & Walton, 1981; Woods & Williams, 1976; Yeakle & Cooper, 1996); lay people ranging from preschoolers to adults (Betz, Blood, & Blood, 2008; Borsel, Brepoels, & De Coene, 2011; Davis, Howell, & Cooke, 2002; Dietrich, Jensen, & Williams, 2001; Erickson & Block, 2013; Evans, Healey, Kawai, & Rowland, 2008; Ezrati-Vinacour, Platzky, & Yairi, 2001; Gabel, 2006; Griffin &

Leahy, 2007; Hartford & Leahy, 2007; Healey, Gabel, Daniels, & Kawai, 2007; Hughes, Gabel, Irani, & Schlagheck, 2010; Klein & Hood, 2004; Langevin, 2009; Langevin, Packman, & Onslow, 2010; Logan & Willis, 2011; Panico, Healey, Brouwer, & Susca, 2005; Susca & Healey, 2001; 2002; Von Tilling, 2011); and even PWS themselves (Boyle, 2013; Craig, Blumgart, & Tran, 2009; Klein & Hood, 2004).

Adult perceptions of stuttering. As stereotypes continue to be reinforced, lay people and PWS may begin to internalize these stereotypes leading to self-stigma and persistence of stereotyped behaviors and emotional states. It has been suggested that these stereotypes can also cause negative effects in adulthood (Boyle, 2013; Craing, Blumgart, & Tran, 2009; Craig & Calver, 1991; Dietrich, Jensen, & Williams, 2001; Hurst & Cooper, 1983; Hughes, Gabel, Irani, & Schlagheck, 2010a; Klein & Hood, 2004; Logan & Willis, 2011; Van Borsel, Brepoels, & De Coene, 2011). Craig, Blumgart, and Tran (2009) conducted a study with 200 adults who stuttered and 200 adults who did not stutter. Each participant was interviewed and completed standardized psychological and quality of life testing. Those participants who stuttered also had 3-minutes of their speech analyzed to determine severity of stuttering. Adults who stuttered had significantly lower scores relating to vitality, social function, emotional function, and mental health. Other research has shown that coronary heart disease has similar impacts on mental health, emotional function, social function, and vitality. These findings indicate that stuttering has a significant impact on the quality of life for adults who stutter. Many authors have suggested that these negative impacts may be due to negative listener perceptions of adults who stutter (Boyle, 2013; Craig, Blumgart, & Tran, 2009; Craig & Calver, 1991; Dietrich, Jensen, & Williams, 2001; Hurst & Cooper, 1983; Hughes, Gabel,

Irani, & Schlagheck, 2010a; Klein & Hood, 2004; Logan & Willis, 2011; Van Borsel, Brepoels, & De Coene, 2011).

Studies have shown that adult listeners have preconceived misconceptions and assumptions about PWS. Hughes, Gabel, Irani, & Schlagheck (2010a) had graduate and undergraduate students fill out an open ended questionnaire asking how PWS are affected by their dysfluency. In depth interviews were then conducted with 18 of the participants so that researchers could ensure that answers on the written portion were being interpreted correctly. It was found that fluent listeners thought that PWS were shy, frustrated, nervous, and suffered from discrimination in employment opportunities due to stuttering. It was also found that many participants believed PWS were negatively affected by real or anticipated listener reactions. Dietrich, Jensen, and Williams (2001) also conducted a study focusing on university students' perceptions of adults who stutter. Five hundred and forty-four questionnaires were answered completely and returned. Participants read a paragraph describing a peer in college that either used the term "stutterer" twice or used the terms "who stutters" and "has had a stuttering problem." Participants then rated the hypothetical peer's traits like degree of tension and employability using a 7-point Likert scale. There was no significant difference between ratings based on the use of first-person terminology in the vignette.

Logan and Willis (2011) examined the accuracy with which 40 adult participants who did not stutter predicted stuttering-related communication attitudes. Before being exposed to the stimulus the participants provided demographic information and self-ratings of stuttering knowledge. Stimuli were created of an adult male with a mild stutter and an adult male with a severe stutter each producing a narrative. The participants either viewed the stimulus in a

video-audio format or an audio-only format. After viewing or listening to the stimulus the participants filled out the Erickson S-24 scale, a scale of 24 true and false statements that measures interpersonal communication attitudes, as they believed the men in the video or audio recording would have. Results indicated that those participants who viewed the stimulus as an audio-visual presentation were more likely to overestimate the impact of stuttering of both the adults who stuttered. Listeners rated stuttering to be more debilitating to the speaker than the speaker himself rated his level of impairment due to his speech disorder. Participants also overestimated the impact of stuttering for the adult who stuttered severely, rating his fluency as having a more negative impact than the speaker did himself.

Adult perceptions of stuttering may also influence other opportunities for PWS such as work, independent living, meaningful relationships, or other social opportunities (Boyle, 2013; Craig & Calver, 1991; Hurst & Cooper, 1983; Klein & Hood, 2004; Van Borsel, Brepoels, & De Coene, 2011). Studies examining how employers view their employees who stutter found that employers were more likely to view PWS as being less employable and not as likely to receive promotions (Craig & Calver, 1991; Hurst & Cooper, 1983). Craig and Calver (1991) had a group of employees who stuttered undergo therapy, and then had employers rate the employees who received therapy. It was found that after therapy employers' perceptions of the employees were significantly enhanced. A study conducted by Hurst and Cooper (1983) analyzed the responses of 644 employers on the Employers Attitudes Towards Stuttering (EATS) Inventory. About 30% of employers agreed that stuttering interferes with job performance and about 40% agreed that stuttering interferes with promotion opportunities. Nine out of ten employers also agreed that stuttering decreases employability.

Klein and Hood (2004) had two hundred and thirty-two adults who stuttered assess the impact stuttering had on their employment. Participants were recruited at the 2000 and 2001 conventions of the National Stuttering Association (NSA). Each participant filled out a survey that included questions about demographic information, general impact of stuttering in the workplace, and participants' personal experiences with stuttering in the workplace. Analysis found that 71% of participants thought stuttering "decreases an individual's chances of being hired" and 70% of participants believed stuttering "interferes with promotion possibilities" (Klein & Hood, 2004, p. 261). Concerning personal experiences in the work place, 69% of participants agreed, "stuttering interfered with their job performance at least some of the time" (Klein & Hood, 2004, p. 262). In fact, 50% of participants specifically sought positions that required little speaking.

Regarding the development of romantic relationships in young adulthood, Van Borsel, Brepoels, and De Coene (2011) randomly chose participants off the street and asked whether stuttering would inhibit the participants from starting a conversation, having a date, or "going steady" with a person depicted in a photograph. It was found that stuttering would prevent almost half the participants from participating in one or more of the above steps. Although the participants were not requested to state why they would not engage in these behaviors, it is possible their reasons may be related to stereotypes they possess about the personalities of PWS.

Bi-polar adjective rating scales have been used in numerous studies examining listener perceptions of PWS. While only exploring a "limited number of descriptions of PWS" (Gabel, 2006, p. 225), adjective scales are effective tools for providing information regarding listener perceptions of the personality traits of PWS. Woods and Williams (1976)

originally constructed a bipolar adjective scale, by taking 25 traits commonly used by speech language pathologists to describe PWS, ascribing antonyms to each trait (e.g., "friendly" and "unfriendly") and anchoring the adjective pairs on a 7-point scale (e.g., "very much friendly", "quite a bit friendly", "slightly friendly", "neutral", "slightly unfriendly", "quite a bit unfriendly", "very much unfriendly"). Participants rated four hypothetical cases including: a typical 8-year old male, 8-year old male who stutters, typical adult male, and adult male who stutters, presented in a random order, using the 25 sets of bipolar adjectives on the scale. Results showed that participants expected more "undesirable" traits in those who stutter versus those who do not stutter.

Several other researchers used adaptations of the bipolar scale created by Woods and Williams (1976) to examine listener perceptions of the personality traits of PWS (Collins & Blood, 1990; Gabel, 2006; Lee & Manning, 2010; Von Tiling, 2011). These studies have examined the effects of self-disclosure, the admission of therapy involvement, and modifications of a stuttering sample on listener perceptions. Collins and Blood (1990) looked at the effects of acknowledgement of stuttering on how listeners perceived the personality traits of PWS. After watching video stimuli the participants completed a survey with 14 bipolar adjective pairs. It was found that when PWS acknowledged their stuttering, listeners perceived the PWS more positively on every personality trait measure.

A similar study conducted by Lee and Manning (2010) had two separate experiments, one that examined the effect of modification and acknowledgement on listener perceptions and another that allowed listeners to contrast two speech samples in which the speaker does or does not acknowledge dysfluencies. In experiment one, participants watched one of four video conditions of stuttered speech in which the speaker either stuttered only, stuttered with

modifications (i.e., decreasing effort and pulling out of all moments of dysfluency), stuttered with acknowledgement, or stuttered with modifications and acknowledgement. After watching the videos, participants filled out a survey with 21 bipolar adjective pairs. In experiment two, participants were exposed to both a video of a PWS who does not acknowledge his dysfluencies and one where he does. The researchers found that in experiment one, the PWS without modification or acknowledgment, was rated the most negatively, while the PWS with modification and acknowledgement was rated to have the most positive personality traits. In experiment two, the sample in which the speaker acknowledged his dysfluencies was rated significantly more positively than when he did not acknowledge his dysfluencies.

The effects of stuttering severity, therapy involvement, and stuttering behaviors (e.g., hesitations, prolongations) on how listeners perceive adults who stutter have also been examined using adjective pairs. Gabel (2006) had participants respond to one of four descriptions of a PWS that differed in severity and therapy involvement. The participants completed a survey with 25 bipolar adjective pairs. Results showed that descriptions of people with severe stuttering led to more negative perceptions of personality traits than descriptions of people with mild stuttering. Secondly, knowledge that a PWS was enrolled in therapy elicited more positive responses from listeners than a PWS not enrolled in therapy. Von Tiling (2011) explored the effect that stuttered, hesitant, and prolonged speech had on listener perceptions of personality traits. One hundred and fifteen adults participated in the study. Participants watched one of four videos depicting a conversation in which one speaker's speech was stuttered, stuttered and hesitant, hesitant, or prolonged. After watching the video participants filled out 25 bipolar adjective pairs that measured pleasantness, self-

confidence, communicative competence, intelligence, and attractiveness. Results showed that hesitant speech caused more negative personality evaluations than stuttered and prolonged speech, noting, "verbal avoidance behaviors like interjections, revision, incomplete phrases, and pauses make PWS look more incompetent" (Von Tilling, 2011, p. 169).

Adults not only perceive other adults who stutter more negatively but also negatively perceive children who stutter as young as 3 years old. A study conducted by Betz, Blood, and Blood (2008) found that adults hold negative perceptions towards children who stutter. One hundred and sixty undergraduate students in university completed a three part survey that included: reading a vignette about a 3-6 year old child who either did or did not stutter, completing a 25 item semantic differential scale, and finally providing personal demographic information. Results found significantly more negative ratings when the sentence "He stutters" was included in the vignette. This supports that the word "stutter" carries negative connotations when applied to any speaker from preschoolers to adults.

Gender differences in adult perceptions of stuttering. The current literature regarding gender differences in adult listener perceptions is conflicting (Lee & Manning, 2010; St. Louis, 2011; Von Tiling, 2011). Some studies have found female adults judged PWS significantly more positively than male adults (Burley & Rinaldi, 1986; Dietrich et al., 2001; Lee & Manning, 2010). Burley and Rinaldi (1986) looked specifically at differences between male and female perceptions of stuttering. Twenty subjects aged 15-35 participated in the study and listened to two recordings of a female and male who severely stuttered. Participants then rated the speakers using 14 bipolar adjective pairs. Results indicated that male participants rated both the female and male's stuttered speech significantly more negatively than the female participants. Dietrich et al. (2001) found that females were

significantly more positive than their male peers when rating the intelligence, social adjustment, and employability of a hypothetical adult who stutters. Lee and Manning (2010) found that female participants were significantly more positive in their ratings of stuttered speech than male participants.

Other researchers have found no gender difference (St. Louis, 2011; Von Tiling, 2011; Yairi & Williams, 1970). A study conducted by St. Louis (2011) looked specifically at differences between male and female perceptions of stuttering. Subject data already collected in the *Public Opinion Survey of Human Attributes – Stuttering* (POSHA-S) database was analyzed. While there were minor differences in females and males (i.e., females reported less impatience than males), overall all participant profiles were similar regardless of gender. Von Tiling (2011) found that there were no significant differences between male and female ratings of stuttered speech, but males did rate the speakers as slightly more self-confident than the female listeners. A study conducted by Yairi and Williams (1970) found there was no significant difference between male and female speech-language pathologists' perceptions and descriptions of hypothetical school-aged boys who stutter.

In summary, research examining how adults perceive stuttered speech shows that adult listeners perceive stuttered speech more negatively than fluent speech, given real or hypothetical stimuli, and when presented with either a child or adult who stutters. The above studies also indicated that adult perceptions of PWS are more negative when PWS do not acknowledge their dysfluencies, do not use fluency modifications (e.g., pull-outs, decreased effort), and/or have a more severe fluency disorder. These negative perceptions of stuttered speech may have consequences for adults who stutter including decreased job opportunities and difficulties forming romantic relationships.

Child and adolescent perceptions of stuttering. Negative listener reactions to stuttered speech among children can develop as young as 3 years of age (Langevin, Packman, & Onslow, 2010). Four preschoolers who had diagnoses of stuttering participated in a study conducted by Langevin, Packman, and Onslow (2010). Parents completed the Impact of Stuttering on Preschoolers and Parents questionnaire. Answers on this questionnaire indicated that while only one child had been teased for his speech all children experienced increased challenges including lowered self-confidence and difficulty engaging with peers. Results from the observation of the participants' interactions with peers indicated that preschool aged peers had negative reactions to the stuttering participants including confusion, taunting, and exclusion from play activities. Griffin and Leahy (2007) conducted a study in which eighteen children ranging from 3-5 years of age were exposed to videos. One video showed a clip of a puppet with fluent speech telling a story and the other video depicted a puppet with moderately dysfluent speech telling the same story. Both puppets had an adult female voice. The children were interviewed after viewing the videos and also presented with four antonym pairs (e.g., sad/happy) and asked to determine the traits of the puppets. The dysfluent puppet was perceived significantly more negatively than the fluent puppet, with 79% of all comments indicating negative views of the dysfluent puppet's personality traits and intelligence.

These negative perceptions held by children as young as 3 years of age, are also seen in early elementary aged children. Bajaj, Hodson, and Westby (2005) examined perceptions of stuttering among children who stutter and their fluent peers. Participants were enrolled in kindergarten, 1st, and 2nd grade. Twenty-three participants stuttered and the other twenty-three participants were fluent. A structured interview was conducted with all the participants

and the interviewer asked questions like: “How does a good talker talk?” and “How does a bad talker talk?” Transcripts were taken of each participant’s conversation. Children who stuttered alluded to stuttering-behaviors in 53% of their responses while children who did not stutter only did so in 17% of responses. These results suggest that children who stutter are more aware of stuttering than their fluent peers, which may lead children who stutter to “perceive themselves as less capable speakers relative to their fluent peers” (Bajaj, Hodson, & Westby, 2005, p. 58). A study conducted by Culatta and Sloan (1977) had 60 participants from 1st and 2nd grades listen to an adult female read a story once fluently and once with dysfluencies (e.g., repetitions and blocks). After listening to the two stories the participants were then asked questions about which recording they preferred and why. Fifty-seven out of the sixty participants preferred the fluent recording. No participants used the term “stutter” to define the dysfluent sample, but they did note that the dysfluent speaker was “sad”, “fearful”, and “didn’t sound out the words the same” (Culatta & Sloan, 1977, p. 31).

Other studies have found evidence that not only supports the continuance of negative perceptions as children age, but also indicated that the negative perceptions may become more widespread as children age (Ezrati-Vinacour, Platzky, & Yairi, 2001; Giolas & Williams, 1958; Hartford & Leahy, 2007). Ezrati-Vinacour, Platzky, and Yairi (2001) conducted a study about young children’s (aged 3-7) awareness and perceptions of dysfluencies. Fluent speakers were presented with a video that depicted two puppets, one that was fluent and one that was dysfluent (i.e., repetitions, blocks, and prolongations). Each puppet said the same 6 sentences. After both puppets said each sentence, the participants were asked to identify which puppet “talks like you”. After all 6 sentences were presented, the participants were asked questions to determine the children’s perceptions of the puppets

based on their speech (e.g., "Which one would you like to play with?"). Results indicated that 26.7% of the 3-year-old participants rated the dysfluent speech as "not good" (p. 375). The percentage of participants who rated the dysfluent speech as "not good" significantly increased to 81.3% for the 4-year-old participants, 93.8% for 5-year-old participants, and 100% for 6-year-old participants. This indicates that negative perceptions of stuttering increase with age. Participants were also less likely to pick the dysfluent puppet as a friend as the participants' age increased, increasingly citing the puppet's speech as the reason why they would not be friends.

A study conducted by Giolas and Williams (1958) had 120 participants from kindergarten to 2nd grade listen to three different presentations of a story. Three adult females read three different stories being fluent, using interjections (e.g., "uh" and "ah") for 10% of the total words, and using repetitions (e.g., two-syllable and three-syllable repetitions) for 10% of the total words. The researchers were looking at the effect of specific fluency patterns on story preference and preference for a specific speaker. Participants listened to three story presentations and then answered questions such as "Which story did you like best?" and "Which lady would you like to have for a teacher?" (Giolas & Williams, 1958, p. 88). Results indicated that most children were aware of the different speech patterns and indicated that the speaker's speech was the reason for preferring one story or speaker over another. Participants preferred the fluent pattern the most, the interjection story presentation second most, and the repetition story presentation the least. It was also noted that the 2nd graders more often preferred the fluent speaker and used the label "stuttering" when describing the dysfluent story presentations. This indicates that participants' awareness of dysfluencies and negative perceptions of dysfluencies increased as the participants' increased in age.

Hartford and Leahy (2007) focused on the perceptions of primary school children (6-13 years of age) towards PWS. All participants were exposed to two audio recordings of a female adult reading a story. In one presentation the speaker was fluent and in the other presentation the speaker incorporated repetitions, prolongations, blocks, and struggle reactions to portray a moderate-to-severe stutter. After listening to both recordings, the participants completed a 14-item questionnaire that focused on personality traits and social skills and also wrote down their thoughts about both audio recordings. Younger participants (6-8 years old) completed this process in small groups and older participants (8-13 years old) completed the process as a class. Results indicated that all participants associated positive traits with the fluent recording and negative traits with the dysfluent recording. The responses of the younger group (6-8 years old) were significantly less negative from the older group's (8-13 years old) responses, again indicating that perceptions of PWS become more negative as listeners age.

Culatta, Bader, McCaslin, and Thomason (1985) studied the attitudes of school-aged children who stuttered. Twelve participants from kindergarten to 6th grade participated in the study. All participants had a diagnosed fluency disorder. Each participant either read a 100-word passage or spoke for approximately 100-words. After this each participant was asked what three wishes they would make, if the participants did not make a wish concerning their fluency, the question, "If you could change any three things about yourself, what would they be?" (p. 88) was then asked. Out of 72 opportunities for participants to indicate they would like to change the way they speak, only once did a participant indicated he would like to "stutter no more" (Culatta et al., 1985, p. 89). This study suggests that children and young

adolescents "as a group, are not highly concerned about their dysfluencies" (Culatta et al., 1985, p. 89); however this finding is not supported by the other research reviewed.

A study done by Langevin (2009) had 97 children in 4th-6th grade view a video of a 9-year-old boy with a moderate stutter and an 8-year-old girl with a severe stutter. After viewing the video, participants then filled out the Peer Attitudes Toward Children who Stutter (PATCS) scale and indicated if they knew anyone who stuttered. The lower the rating, the more negatively the participants viewed PWS. Results showed children who indicated familiarity with someone who stutters had significantly more positive perceptions of PWS averaging a score of 3.89 as compared to the average score of 3.48 for those participants not familiar with PWS. While not reaching statistical significance, it was found that views of PWS grew slightly more negative as age increased changing from an average rating of 3.77 in 4th grade to 3.51 in 6th grade.

As indicated in the studies above, negative perceptions of PWS persist, and may actually increase in occurrence, as children reach young adolescence (Ezrati-Vinacour, Platzky, & Yairi, 2001; Giolas & Williams, 1958; Hartford & Leahy, 2007). Adolescence is defined by the World Health Organization as the period between 10 and 19 years of age (World Health Organization, 2014). During adolescence, individuals go through anatomical, neurobehavioral, cognitive, and social changes (Spear, 2000). These changes lead to increased awareness of peers and peer attitudes, as well as increased influence of the social environment on individual habits and perceptions (Spear, 2000). Due to an increase in peer interactions and peer influence during adolescence, researchers have examined how adolescents who stutter and adolescents who do not stutter perceive stuttering.

A study conducted by Davis, Howell, and Cooke (2002) explored sociodynamic relationships between students who stutter and their fluent peers. Four hundred and three children participated in the study, 16 of which had a fluency disorder. Each child was interviewed individually by the researchers and asked to pick the three children in their class they liked the most and the least. All participants were then asked to assign three peers to each of the following eight behavioral descriptions: shy, assertive, co-operative, disruptive, leader, uncertain, bully, and bully victim. Children who stuttered were twice as likely to be rejected and only 6.25% of children who stuttered were labeled "popular" as compared to 25.84% of fluent peers. Children who stuttered were also significantly more likely to be labeled "bully victim" than their fluent peers. These results indicate that children from 8 to 14 years of age are highly aware of dysfluencies and associate negative traits such as "shy", "bully victim", and "seeks help" with students who are dysfluent.

Evans, Healey, Kawai, & Rowland (2008) examined middle school students' perceptions of a peer who stutters. Sixty-four participants ranging in age from 10 to 14 years were shown a video of a male adolescent stuttering at different severities (i.e., <1%, 5%, 10%, and 15% syllables stuttered) while telling a joke. Each participant was randomly shown one of the four video presentations. The participants were then asked to rate their level of agreement to 11 Likert statements such as, "I would talk with this boy at school", to analyze their perceptions of the adolescent who stuttered in the video. Results showed that adolescents perceived a peer with 10% or 14% syllables stuttered would have a difficult time fitting into school and may experience teasing or bullying due to stuttering.

Not only do listeners' negative perceptions put adolescents who stutter at a higher risk of bullying, it also may affect the formation of relationships. As described previously,

Van Borsel, Brepoels, and De Coene (2011) randomly chose participants off the street and asked whether stuttering would inhibit the participants from starting a conversation, having a date, or "going steady" with a person depicted in a photograph. Researchers found that older adolescents (16-17 years of age) who participated in the study, just like young adults, were less likely to engage in the at least one of the above steps for forming a romantic relationship with PWS as compared to a person who does not stutter.

Bipolar adjective pair scales have been proven to be effective ways to examine not only adult's perceptions of communication disorders, but children's perceptions as well. Lass and colleagues (Lass, Ruscello, Bradshaw, & Blankenship 1991; Lass, Ruscello, Harkins, & Blankenship, 1993) developed a bipolar adjective pair scale similar to that used by Woods and Williams (1976), but better suited to survey adolescents by replacing advanced vocabulary (e.g., reticent) with elementary vocabulary. Lass, Ruscello, Bradshaw, & Blankenship (1991) had 13 adolescent participants judge the speech of normal and voice disordered children, using a set of 22 bipolar adjective pairs appropriate for adolescents. Results showed that the presence of a voice disorder negatively affected listener perceptions of personality traits in voice-disordered children. In a similar study, Lass, Ruscellow, Harkins, & Blankenship (1993) had 19 middle-school aged participants judge the personality traits of dysarthric children using the same 22 bipolar adjective pairs. Researchers found that dysarthric speech negatively affected listener perceptions of personality traits.

Freeby and Madison (1989) and Haley and Hood (1986) also used bipolar adjective scales in their studies with older children and younger adolescents. Freeby and Madison (1989) had 102 children between the ages of 10 and 12 years of age listen to an audio recording of two peers with defective /r/s and two peers with normal articulation reading a

poem. After listening to the audio recordings participants rated the speaker's personality traits and intelligence using 9 bipolar adjective pairs. The personality traits and intelligence of the speakers with defective /r/s was rated significantly lower than the speakers with normal articulation. Haley and Hood (1986) had 87 junior high school students from different schools (i.e., school for the hearing impaired, rural school, suburban school, and inner city school) observe videos of two peers wearing a) body type hearing aid, b) postauricular aid, and c) no hearing aid. After viewing the videos participants rated the peers in the video using 15 bipolar adjective scales that measured socioeconomic status, speech, intelligence, ambition, and appearance. Results indicated that students from the inner city school had the overall most negative ratings of the boys' traits while the school for the hearing impaired had the most positive ratings. The school for the hearing impaired however, had the most negative ratings regarding intelligence and whether or not they would like to be around the person wearing hearing aids. It was also found that the boys' traits were rated the most negatively when wearing the body type aid and the most positively when wearing no aid.

Bipolar adjective pair scales have also been used to examine children's perceptions of stuttering. Franck, Jackson, Pimentel, and Greenwood (2003) had 75 participants from 4th and 5th grade watch a videotape of an adult male speaker and then fill out a survey to determine the participants' attitudes towards the speaker's personality traits after viewing the video. Each class was randomly assigned to view either a video of the speaker using fluent speech or a video of the speaker using moderately dysfluent speech with no secondary characteristics. After viewing one of the video recordings, participants completed a survey containing 12 adjective pairs (e.g., friendly/unfriendly) and rated the adjective pairs on a 7-point continuum. The scale used in this study was compiled and adapted from scales used by

Freeby and Madison (1989), Wenker, Wegner, and Hart (1996), and White and Collins (1984). The adjective pairs were then sorted into those that defined personality and those that identified intelligence using guidelines from Wenker et al. (1996). Results showed that 4th and 5th grade students who viewed the dysfluent video had significantly more negative perceptions of the speaker's personality traits (e.g., shy) and intelligence (e.g., dull) than the 4th and 5th grade students who viewed the fluent video sample. Participants made comments during the study such as "Can't he get that fixed?" and "Can't he stop?" indicating a poor understanding of stuttering. The researchers concluded that these results "support the need for education in the school environment about stuttering" (p. 11) for both students and staff.

Gender differences in child and adolescent perceptions of stuttering. Studies investigating gender differences of child and adolescent perceptions of PWS are conflicting. Some studies have found that there are no significant differences between male and female perceptions of PWS (Evans, Healey, Kawai, & Rowland, 2008; Hartford & Leahy, 2007; Langevin, 2009). Evans, Healey, Kawai, and Rowland (2008) found no significant differences between male and female adolescents' perceptions of a male adolescent that stuttered. Similarly, Hartford and Leahy (2007) found that there were no significant differences between male and female children's perceptions of PWS. Langevin (2009) also found that, while male children had slightly more negative views of PWS than female children, it was not statistically significant.

However, other studies have found differences between male and female perceptions of PWS (Burley & Rinaldi, 1986). A study conducted by Burley and Rinaldi (1986), included a few adolescent participants (aged 15-17) and examined how speaker's fluency influenced attitudes towards the speaker. This study indicated that, regardless of the gender of PWS, the

male listeners rated the dysfluent speakers more negatively than female participants. It should also be noted that the sample size of adolescents in this study was small and results may not generalize to a broader population.

Importance of studying adolescent listener perceptions. Adolescents who stutter demonstrate a visible and audible difference from their peers. It has been suggested that this may inhibit their opportunities to cultivate peer relationships which may in turn lead to increased risk of bullying and teasing (Blood & Blood, 2004), as well as increased risk of social stigma (Blood, Blood, Tellis, & Gabel, 2003). Adolescents who stutter may also be at a greater risk of social anxiety, a diagnosis of which can also contribute to social stigma (Erickson & Block, 2013; Iverach & Rapee, 2014; Mulcahy, Hennessey, Beilby, & Byrnes, 2008). It has been suggested that social stigmas can have negative effects including lowered self-esteem, social isolation, depression, and decreased performance in academics (Blood, Blood, Tellis, & Gabel, 2003; Boyle, 2013). Social stigmas from stuttering and social anxiety can also place adolescents who stutter at increased risk for bullying and teasing (Erickson & Block, 2013; Iverach & Rapee, 2014; Mulcahy, Hennessey, Beilby, & Byrnes, 2008). The social stigma and anxiety experienced by adolescents who stutter may be due to negative social consequences of judgments by others (Iverach & Rapee, 2014; Mulcahy, Hennessey, Beilby, & Byrnes, 2008).

Blood, Blood, Tellis, & Gabel (2003) had 39 adolescents who stuttered fill out the Personal Report of Communication Apprehension (PRCA-24), the Self-Perceived Communication Competence (SPCC) scales, and complete the Stuttering Severity Instrument for Children and Adults, 3rd edition. Thirty-nine normally fluent adolescent participants also completed the communication scales to act as a control group. Results indicated that more

than twice as many participants who stuttered rated themselves as having higher communication apprehension than their fluent peers. Approximately three to four times more participants who stuttered reported poor self-perceived communication competence in the subcategories of: strangers, group discussions, and interpersonal conversations. It was also noted that participants who had mild dysfluencies had the lowest communication apprehension, while those participants with more severe dysfluencies had the highest apprehension.

Blood and Blood (2004) administered the Life In School (LIS) checklist to 53 adolescents who stuttered, ranging in age from 13 to 18 years. Fifty-three adolescents who did not stutter also completed the LIS checklist to act as the control group. The LIS checklist includes 39 statements such as "During this week, another child in school smiled at me", and the participants indicated no, once, or more than once. Researchers found forty-three percent of participants reported experiencing bullying within the past week as compared to eleven percent of their fluent peers. Erickson and Block (2013) studied the social and communication impact of stuttering on adolescents and their families. Thirty-six participants from 11-18 years of age completed the Self Perceived Communication Competence Scale (SPCC), the Personal Report of Communication Apprehension (PRCA), the Stuttering-School subscale from Teasing/Bullying Questionnaire for Children who Stutter (TBQ-CS), and the Stigmatization and Disclosure in Adolescents who Stutter Scale. The participants' parents also completed a parent questionnaire. Fifty-three percent of the participants experienced bullying related to stuttering, leading to participants "not wanting to go to school" and feeling "sad or depressed" (Erickson & Block, 2013, p. 317).

Iverach and Rapee (2014) discussed the current status of social anxiety disorder in connection with stuttering, reviewing the research in this area. This analysis suggested that fear of negative evaluation by others may lead to the development of social anxiety disorder over the lifespan of adolescents who stutter. The researchers indicated that social anxiety disorder could be a "disabling experience" for those who stutter and may "exacerbate stuttering" (Iverach & Rapee, 2014, p. 77). A study conducted by Mulcahy, Hennessey, Beilby, and Byrnes (2008) compared the severity of anxiety in adolescents who stutter and their fluent peers. Nineteen adolescents who stuttered participated in the study along with 18 normally fluent adolescents. Participants completed the State and Trait Anxiety Inventory and Fear of Negative Evaluation scale, and those participants who stuttered also filled out the Overall Assessment of the Speaker's Experience of Stuttering Teen Versions (OASES-T). It was found that adolescents who stutter rated themselves as having significantly higher: state and trait anxiety, fear of being negatively evaluated, and difficulty communicating than their fluent peers did.

In summary, negative perceptions of stuttering exist among preschoolers, school-age children, and adolescents, and become more common as children age. In addition, these negative listener perceptions experienced by adolescents who stutter may lead to increased apprehension about speaking, an increased risk of bullying and teasing due to stuttering, social isolation, anxiety, and difficulties forming romantic relationships (Blood & Blood, 2004; Evans, Healey, Kawai, & Rowland, 2008; Langevin & Prasad, 2012; Van Borsel, Brepoels, & De Coene; 2011). As a result, changing negative listener perceptions, especially in the adolescent population, has become a focus of investigation.

Changing Listener Perceptions of Stuttering

To decrease the stigma and negative stereotypes of stuttering, the perceptions of listeners must change. This is critical during the adolescent years. Although adolescents have negative perceptions of PWS, research findings suggest these perceptions may be susceptible to change. For example, Snyder (2001) conducted a study to show how the perceptions of graduate students changed after viewing documentaries. Students were shown either, *Speaking of Courage* about stuttering therapy, or *Effects of Altered Auditory Feedback on Stuttering Frequency at Normal and Fast Speaking Rates* about the affects of altered auditory feedback on stuttering. Participants completed the Clinicians' Attitudes Toward Stuttering (CATS) inventory both before and after viewing one of these films. Results showed that listener perceptions changed regarding the efficacy of operant stuttering therapy following *Speaking of Courage*. Other shifts in perception after viewing *Effects of Altered Auditory Feedback on Stuttering Frequency at Normal and Fast Speaking Rates* were subtler but present for the statements "stuttering is the result of multiple coexisting factors" and "there is no such thing as a primary stutterer". Overall, the study indicated that it is possible to cause perceptual changes of stuttering using visual-audio media.

Flynn and St. Louis (2011) explored changing adolescent attitudes towards stuttering. Eighty-three students from high school health classes participated in this study. One class was exposed to a live presentation on stuttering conducted by the first author of the study, a moderate-to-severe stutterer. A second class viewed a documentary about stuttering, *MTV True Life: I Stutter*, co-starring the first author. The third class viewed the documentary and then listened to a shortened live presentation, leading to a total of three experimental conditions: oral, video, video + oral. Four to five days before participating in the study, an

adapted version of the Public Opinion Survey of Human Attributes-Stuttering (POSHA-S) was filled out by all participants. This survey was also filled out after participants were exposed to the experimental conditions. Results indicated that adolescents shared attitudes towards stuttering similar to that of adults. Adolescents believed that PWS are "nervous, shy, and have psychological problems" (Flynn & St. Louis, 2011, p. 117). The researchers also found that after just one class devoted to changing attitudes towards stuttering, participants' attitudes were influenced positively for most questions on the POSHA-S, particularly after being exposed to either the oral or video + oral experimental condition.

This adds evidence backing a feasibility study done by Langevin and Prasad (2012) looking at the feasibility of a curriculum-based stuttering education and bullying awareness program in schools. One curriculum developed for bullying prevention that includes stuttering as topic area of interest is the Teasing and Bullying: Unacceptable Behaviour (TAB) program developed by Langevin. This curriculum aims to increase awareness and knowledge of teasing and stuttering while also improving attitudes towards children who stutter. The program includes six teaching units that use classroom discussion, activities, and take-home activities to aid in student learning and growth. Perhaps if listener perceptions are targeted early on in education, perceptions and attitudes towards stuttering can be influenced in a positive manner.

Development of Listener Perceptions of Stuttering.

Several factors may influence the development of listener perceptions. One source that may influence listener perception is personal experience. People may think, "I'm an outspoken person and I would be easily frustrated by the inability to get my thoughts across

in an organized and timely fashion" (Hughes, Gabel, Irani, & Schlagheck, 2010a, p. 52). As discussed earlier, Hughes, Gabel, Irani, & Schlagheck (2010a) had graduate and undergraduate students answer questions about the life effects of stuttering. A common theme found, was that fluent listeners thought about how they felt in dysfluent situations and then reported that they believed PWS would feel similarly in those dysfluent situations (e.g., shy, frustrated, and nervous). The use of personal experience to infer how PWS might feel or act is also known as the "inference hypothesis" and was originally posed by White and Collins (1984). White and Collins (1984) had 80 undergraduate students use 25 bipolar adjective pairs created by Woods and Williams (1976), to rate the personality traits of a hypothetical adult who stutters and a normally fluent adult. Each participant was exposed to one condition, either the adult who stutters or the normally fluent adult. Results indicated that the adult who stuttered was rated significantly more negatively than a normally fluent adult. The researchers suggested, "the negative character of the stereotype [of PWS] would result from the fact that the internal states associated with dysfluent speech in normally fluent speakers happen to be negative" (White & Collins, 1984, p. 570).

The "anchoring and adjustment theory" suggests that people "make an adjustment from an existing anchor in order to reach a decision" (MacKinnon, Hall, & MacIntyre, 2007, p. 299) or further solidify decisions about a group of people. A study conducted by MacKinnon, Hall, and MacIntyre (2007) had 183 undergraduate students who did not stutter use a 25 bipolar adjective pairs to rate the personality traits of three hypothetical people: a typical male, a male who experienced temporary dysfluencies (state dysfluency), and a male with a permanent stutter (trait dysfluency). Results indicated that there was a significant difference between the ratings of the normally fluent male and the state dysfluent male on 15

of the adjective pairs, rating the state dysfluent male more: nervous, shy, self-conscious, tense, anxious, withdrawn, quiet, reticent, avoiding, fearful, passive, afraid, hesitant, insecure, and self-derogatory. There was also a significant difference between the ratings of the state dysfluent male and the trait dysfluent male on 6 of the adjective pairs, rating the trait dysfluent male more: afraid, fearful, nervous, tense, anxious introverted, and unpleasant. These results support the "anchoring and adjustment theory" showing that raters made adjustments to their anchored views of state dysfluency when rating the trait dysfluent male after rating the state dysfluent male.

The "interaction theory" first proposed by Johnson and Associates (1959) states that PWS adopt the stereotypical behaviors and personality traits held by listeners. Conversely, another theory states that unfavorable stereotypes arise because "most stutterers actually behave in the undesirable fashion indicated" (Woods & Williams, 1976, p. 276). Both of these theories are not supported when personal interaction with PWS is considered. Other researchers have found that personality differences between PWS and people who do not stutter are not dramatic and PWS do not appear to have common "character structure or broad set of basic personality traits" like stereotypes would suggest (Bloodstein, 1995, p. 236; Guitar, 1998; Woods & Williams, 1976). There must then be another way of forming stereotypes about stuttering besides direct interaction with PWS. Williams and Diaz (1999), in a paper discussing the stereotyping of PWS, report, "media depictions do influence beliefs about groups" (p. 3). The "cultivation theory", as stated by Gerbner and Gross (1976), further discusses this idea and cites media as a major catalyst for the formation of stereotypes, both true and misconceived.

Influence of Media on the Formation of Perceptions and Attitudes

Media is a broad term that encompasses print, images, communications, film, and television (McDougall, 2012). This includes books, magazines, comic books, presentations, photographs, motion pictures, documentaries, cartoons, news broadcasts, and many other multi-media transmissions of ideas. Research in the field of media studies has long looked at media in terms of persuasion but only now has begun to examine the role of entertainment media in changing human behaviors (Bates & Ferri, 2010). Entertainment media can be thought of as a subset of media designed to give "satisfaction of both hedonic and non-hedonic intrinsic needs" (Tamborini, Grizzard, Bowman, Reinecke, Lewis, & Eden, 2011). Entertainment media includes any form of media someone finds enjoyable such as television, books, magazines, comics, films, and video games (Bates & Ferri, 2010; McDougall, 2012). These types of entertainment media allow people to form empathetic bonds with people, both real and hypothetical, which may influence and change the way they perceive reality (Bates & Ferri, 2010; Vorderer, Klimmt, & Ritterfeld, 2004).

The "cultivation theory" originally posed by Gerbner and Gross (1976), is the basis for this concept that "exposure to, and the frequency of, messages disseminated through a medium influence an individuals' perceptions of the non-media world" (Bissel & Hays, 2010, p. 390). In other words, the more media an individual is exposed to, the more likely the individual believes mediated portrayals of reality are representative of the real world. Gerbner and Gross (1976) brought up the question, "how much of our real world has been learned from fictional worlds?" (p. 179). This incidental learning of "facts" from television exposure contributes to the creation of assumptions and misconceptions of reality. An

abundance of research in sociology and psychology has examined the influence that entertainment media has on self-perception and the perception of other individuals.

Media portrayals of beauty and violence. Researchers have examined how beauty and violence are depicted in media and how these portrayals influence people, particularly adolescents. Media exposure to beauty standards of thinness predicts ratings of self-esteem and perceptions of beauty among adolescent girls and boys across many races (Bissell & Hays, 2010; Groesz, Levine, & Murnen, 2002; Martins & Harrison, 2012). Martins and Harrison (2012) found that television exposure predicted a decrease in self-esteem in White girls, Black girls, and Black boys. The researchers postulated that, "mass media alter[s] societal ideas about what is normative" (p. 352) by displaying both female and ethnic stereotypes and providing a standard for the perception of these groups (Martins & Harrison, 2012). Likewise, female adolescents who watched more "thin-media" rated female TV stars (thin) more attractive than female athletes (muscular and athletic), regardless of whether the participant played sports (Bissel & Hays, 2010).

These studies suggest that exposure to media that contains thin bodies increases the preference of the thin body type. A meta-analysis of 25 studies on media and body image conducted by Groesz, Levine, and Murnen (2002) found that media had an almost immediate effect on body image and emotional well-being. For example, women negatively perceived their own body after viewing media images of models. It was also noted that the media influence on perceived body satisfaction was greater in adolescent participants, less than 19 years of age.

Researchers have also examined relations between exposure to violence in video games and on television and possible aggression in adults and adolescents. A study

conducted by Dowler (2002) researched how media influences attitudes toward gun control. Participants who marked "strongly agree," "agree," "disagree," or "strongly disagree," on two questions probing respondent attitudes towards gun control on the National Opinion Survey on Crime and Justice were then asked about their mass media viewing habits. These variables included crime show viewing, how long participants were exposed to television, and crime news sources. Sixty-six percent of participants noted television as their primary crime news source versus newspaper, radio, or other. Participants who viewed the most television crime shows were most likely to "agree that being armed is the best defense against criminals" (Dowler, 2002, p. 243). Dowler (2002) hypothesized that these results were due to the fact that those participants who viewed 15 hours or more of television had become "so accustomed to the use of guns that gun control measures" were deemed "unnecessary" (p. 243).

Anderson (2004) examined the relation between video games and aggression behaviors among 45 studies. He analyzed the methodology of each study for nine potential problems and then calculated the effect size, using the results of each study, for five variables including: increased aggressive behavior, aggressive cognition, aggressive affect, cardiovascular arousal, and helping behaviors. The results of the study showed that violence in video games was significantly correlated with all five factors, increasing aggressive behavior, aggressive cognition, aggressive affect, and cardiovascular arousal, but decreasing helping behaviors. Shibuya, Sakamoto, Ihori, and Yukawa (2008) had participants, ages 10-11 years, complete a survey listing favorite video games. Once a list of games was compiled, presence and context of aggression in the games was analyzed. The researchers then measured participant aggression using the Aggression Scale for Children before and after a

one-year period. Researchers found that "unjustified violence, graphicness, availability of weapons, reality, rewards, depicted pain or harm, interactivity, and activity" (Shibuya, Sakamoto, Ihori, & Yukawa, 2008, p. 536) increased aggression for both boys and girls. Collectively, these studies suggest media exposure desensitizes people to violence and can lead to increased aggression and violent behaviors, particularly in adolescents.

Media portrayals of disorder. Other researchers have examined how media portrayals of disorders such as psychological and communication disorders affects the perceptions of others and contributes to misconceptions about disorder. In television programming, the mentally ill are portrayed as committing violence 10 times more than any other group, and 1 in 4 mentally ill characters kill someone (Stuart, 2006). Media portrayals of this group also show little hope of the individual's recovery or reintegration into society (Stuart, 2006). A study done by Angermeyer, Dietrich, Pott, and Matschinger (2005) supports the evidence found by Stuart (2006) showing that mental disorders are usually linked to violence in media portrayals of these disorders. This study included 5025 participants who participated in fully structured interviews that asked for information regarding how many days they watched TV and what channels they watched. The interview also used the Social Distance Scale to measure the desire for distance from those with schizophrenia. Findings showed that desire for social distance from those with schizophrenia "increases almost continuously with the amount of TV consumption" (Angermeyer et al., 2005, p. 247) as indicated by a significant relationship between TV exposure and desire for distance from those with schizophrenia.

Research done by Black and Pretes (2007) examined the representation of physical disability as portrayed in major motion pictures. The researchers chose 18 films produced

between 1975 and 2004 and examined the portrayals of disability based on: personality, community integration, interpersonal relationships, and the presence/absence of common stereotypes. Results showed that while movies no longer depict those with disabilities as "comic figures or beasts" (Black & Pretes, 2007, p. 80) several negative themes are still present including: pity, self-pity, and anger. Some films reviewed also depicted the disabled character as "maladjusted and in need of psychological insight from those without disabilities" (Black & Pretes, 2007, p. 80). Also common was the idea that those with disabilities were "better off dead" (Black & Pretes, 2007, p. 80) and unable to live successful and fulfilling lives. A study conducted by Farnall and Smith (1999) examined reactions of adults towards people with disabilities after viewing specific media portrayals of disability. Participants were taken from a survey done for the National Organization on Disability. Participants were asked if they had viewed *Rainman*, *Life Goes On*, *LA Law*, *Born on the Fourth of July*, *Children of a Lesser God*, or *My Left Foot*, and then asked several questions about their perceptions of discrimination and attitudes towards people with disabilities. Farnall and Smith (1999) found that viewing of certain television programs and movies was related to increased perceptions of discrimination in education and mass transit and a "greater likelihood of feeling uncomfortable" (p. 660) with people with certain types of disability.

A more recent study conducted by Reinhardt, Pennycott, and Fellinghauer (2014) examined the impact of a film portrayal of a man with spinal cord injury on attitudes towards disability. The study included 480 participants in Switzerland with and without disability. Participants watched a 3-minute scene from a television show. The scene depicted a police detective with paraplegia subduing and arresting a criminal. Both before and after viewing the scene participants answered three questions regarding: the eligibility of disabled persons

for several strenuous jobs, the employment percentage of disabled persons living in Switzerland, and the productivity of a 40-year-old man with paraplegia. The researchers found that after viewing the video clip, the answers of the participants without a disability were significantly more positive. Participants believed more disabled persons could work in strenuous jobs and guessed that the percentage of disabled persons in Switzerland who were employed was significantly higher than they had guessed before viewing the video stimulus. Participants with a disability had either a small change or no change in their responses before and after viewing the video clip. The researchers hypothesized this may be due to a pessimistic view towards disability in the media (Reinhardt, Pennycott, & Fellinghauer, 2014).

Hearing loss has also been studied in terms of how disorders are portrayed in the media. Foss (2013) conducted an analysis of popular TV shows that depicted hearing loss. The study focused on how hearing loss was portrayed and how the characters dealt with the loss. Results indicated that there was a seeming lack of media depictions of hearing loss when compared to the prevalence of the disorder in reality. It was also found that the portrayals of hearing loss were misconceived, depicting hearing loss as "uncommon" and even "reversible", both of which are incorrect (Foss, 2013). Many shows also depicted hearing loss as "sudden" and "temporary", when the most common hearing loss is actually a gradual and permanent. Foss (2013) also raised the question that if media does not acknowledge hearing loss as a wide spread deficit, why should the public acknowledge it as such? This speaks to the influence media can hold over the public's perceptions of many disorders.

A study conducted by Hux, Rogers, and Mongar (2000) surveyed 190 adults. A questionnaire was administered orally and interviewers asked questions about the participants' knowledge of the risks, outcomes, and etiology of stroke. The researchers found there were many misconceptions about the warning signs of strokes and less than 10% of participants named the most common risk factors for stroke spontaneously. One of the top sources for information about stroke cited by participants was the media, reporting that television and magazines were common ways participants learned about stroke. This information suggests that misconceptions about strokes may be due in part to misconceived or limited portrayals of stroke in popular media sources.

Media portrayals of stuttering. Research also suggests that media may influence the development of stuttering stereotypes. Bushey and Martin (1988), discussed the portrayal of stuttering in children's literature, analyzing how stuttering was portrayed (i.e., symptomatology, conditions that improve/worsen stuttering, personality characteristics of the PWS, etiology of stuttering, and any treatment of stuttering). Librarians and speech-language pathologists were contacted for suggestions of books with characters that stuttered. Twenty books were selected for review. *Don't Worry Dear* and *Why are People Different?* were written for counseling parents with a child who stutters. While some stories utilized stuttering as a part of the main plot line like in *The Unmaking of Rabbit*, *Trouble with Explosives*, and *Emily Umily*. Other stories portrayed stuttering as merely a character trait like in *The Change Over*. The researchers found that most of the books explicitly depicted stuttering as a struggle rather than just simple repetitions and prolongations. Very few of the books mentioned the causation of stuttering and none of the books reviewed mentioned clinical treatment of stuttering. The researchers did however state that the portrayals of stuttering in children's

literature were “diverse” and “potentially appropriate and useful for a wide range of treatment programs for children who stutter” (Bushey & Martin, 1988, p. 248).

A study done by Logan, Mullins, and Jones (2008) analyzed the portrayal of stuttering in contemporary juvenile fiction. The researchers compiled a list of possible books for review by conducting Internet searches, examining peer-reviewed articles, and consulting with librarians. A total of 29 books were considered for review. In most books reviewed, the character overcame or counteracted the negativity associated with stuttering by performing heroic or remarkable deeds. The researchers also noted that stuttering was usually depicted as a “significant” problem rather than just a character feature. Exceptions to this were *The Flimflam Man, Mary Marony and the Chocolate Surprise*, and *The Treasure Bird* all of which depicted stuttering as just a feature of the character. The books also depicted fluency in a realistic way showing increased fluency when speaking with animals or singing. It was also noted that some of the books talked about how stuttering can run in families (i.e., *Lucky Stars, Mary Marony and the Snake, Jason’s Secret*) and discussed the physiological processes of stuttering (i.e., *Jason’s Secret, Cobra Threat*). Four of the books (i.e., *Lucky Stars, Mary Marony and the Snake, Mary Marnoy Hides Out, Jason’s Secret*), also included activities or events that may occur in speech therapy with a speech-language pathologist, this is a significant increase from the study conducted by Bushey and Martin (1988) in which no books discussed therapy.

Donaher and Minkoff (2014) examined the portrayal of stuttering on YouTube. The researchers conducted four searchers on YouTube using the terms stuttering, stutter, stammer, and stammering. The first 25 videos from each search were taken into consideration and 50 videos were chosen for analysis. The videos were rated on diagnostic

reliability. The first 10 comments of each video were also analyzed for being neutral, negative, or positive. Only 36% of the videos were deemed moderately good to excellent portrayals of stuttering behaviors. It was also found that 28% of the comments analyzed were negative such as "nnnnnnice video" (Donaher & Minkoff, 2014, p. 23), compared to only 24% of the comments that were deemed to be positive. Videos that were deemed more diagnostically reliable had more negative viewer comments. Overall, the researchers concluded that YouTube videos were "more likely to represent the misinformation and stereotypes generally held by the public regarding stuttering" (Donaher & Minkoff, 2014, p. 24) and should be reviewed before being used in therapy.

Johnson (2008) analyzed the portrayal of stuttering in entertainment media including television, movies, and cartoons. His research into this topic suggests that there is a symbiotic relationship between lay-people's perceptions of stuttering and media portrayals of stuttering. He stated that media often "pandered to the public's basic ideas of stuttering" and this in turn perpetuated the "stereotypical, unrealistic, and at times even derogatory" (Johnson, 2008, p. 246) misrepresentation of stuttering. The depiction of stuttering as portrayed by the character Porky the Pig from the *Looney Toons*, shows him with a severe stutter and is constantly "lampooned because of his speech impediment" (Johnson, 2008, p. 246). With Porky the Pig, as it is with so many other stuttering characters, the character is no longer a person but "the physical embodiment of his speech impediment" (Johnson, 2008, p. 248). These negative portrayals of stuttering seem to heavily outweigh positive depictions of stuttering.

Films that have used stuttering as a "lowbrow comedy" addition include *Cannonball Run, The Villain*, and *Smokey and the Bandit II*. Films have also used stuttering as a way to

indicate character weakness or incompetence; *A Fish Called Wanda, The Waterboy, Primal Fear, Harry Potter and Sorcerer's Stone, The Cowboys*, and *My Cousin Vinny* all use stuttering for this reason. Some television shows and films have used stuttering as a way to indicate mental instability, *CSI*, *Criminal Minds,* and *Dead Again* all have depicted violent criminals in the show who, along with committing murder, also stuttered. Johnson (2008) also reviewed an episode of *M.A.S.H.* and the *Justice League of America* in which stuttering is depicted with the good intention of increasing awareness and compassion towards the disorder of stuttering. The characterizations of stuttering in these shows however fall back on crass and single note stereotypes of PWS such as weakness, nervousness, and lack of heroism when portraying the character that stutters.

Very recently there have been some positive and realistic portrayals of stuttering in movies like *The Kings Speech* or books like *Paperboy* and *A Boy and A Jaguar*. Kuster (2011) believed *The Kings Speech* finally provided a "sympathetic" and "accurate" portrayal of stuttering (p. 13). The film depicted a character with depth, and while stuttering was the focus of the film, it was not the main focus of the portrayal of the character. *Paperboy* depicts a teenage boy who takes over a paper route even though he has a prominent stutter. Over the course of the novel the readers are able to empathize with the main character. *A Boy and A Jaguar* portrays a boy who, despite his stutter, finds he has a gift for speaking with animals. This book is appropriate for children in elementary school and can be used to help children identify with with peers who stutter. These depictions of stuttering portray stuttering in a realistic way that allows others to empathize with the character as a whole, not just a speech impediment. These portrayals of stuttering are in sharp contrast of the "trivial" and "mundane" depictions stuttering has received in other entertainment media (Johnson, 2008).

The Stuttering Foundation also provides a comprehensive list of print media that include information and accurate portrayals of stuttering. These print sources are helpful to families, teachers, students, or PWS themselves, when trying to learn and understand the disorder of stuttering. A list of children's literature was created by the Stuttering Foundation and includes many helpful books for introducing kids and families to stuttering. The Stuttering Foundation also regularly reviews books that include stuttering characters. *Wendi's Magical Voice* is a story about a witch who tries to disappear from school so she can avoid speaking, but after befriending other children she moves beyond her fear. *Trouble at Recess*, written and illustrated by an 8-year-old who stuttered, describes the challenges that many children who stutter encounter and how to deal with teasing while educating classmates about the disorder itself. Other print resources reviewed by the Stuttering Foundation include books designed for parents or teachers with children who stutter (i.e., *Stuttering and Your Child: Questions and Answers, The Child who Stutters at School: Notes to the Teacher, If Your Child Stutters: A Guide for Parents*) and PWS themselves (i.e., *From Stuttering to Fluency: Manage Your Emotions and Live More Fully, Tangled Tongue: Living with a Stutter*).

Summary

The above research provides evidence of the negative stereotypes listeners of all ages hold towards PWS. These negative stereotypes include the idea that PWS are weak, nervous, shy, withdrawn, incompetent, and less intelligent than fluent peers. Adolescents who stutter may be at a high risk of suffering from many negative social consequences due to listener stereotypes of PWS and may be at an increased risk for bullying, teasing, and social anxiety.

This in turn may affect adolescents' participation in class and social activities due to fear of negative peer perceptions.

Research in the field of communication and media studies have investigated how disorders are portrayed in the media and have shown most disorders are highly underrepresented and misconceived in entertainment media. The influence of media on the development of perceptions of violence and beauty were also discussed. It was found that media influence was greater, specifically, in participants less than 19 years of age. This is particularly important considering that adolescents are exposed to media more than in childhood (Rideout, Foehr, & Roberts, 2010; Spear, 2000). Considering the large influence media has on forming adolescent perceptions of beauty and violence and the misrepresentation of disorders in entertainment media, an examination of factors that may be contributing to the formation and persistence of perceptions, like media portrayals of stuttering are warranted.

Purpose and Research Questions

The purpose of this study is to determine if negative and neutral portrayals of PWS in major motion pictures affect how adolescents perceive PWS. This study is designed to answer the following research questions:

1) Do adolescents who view neutral portrayals of PWS in major motion pictures perceive PWS differently than adolescents who view negative portrayals of PWS in major motion pictures? Based on previous research by Snyder (2001) and Flynn and St. Louis (2011) that showed that perceptual changes following the presentation of a brief video were possible, it is predicted that the same will be true in this study. It is hypothesized that after

seeing a stimulus of negative portrayals of stuttering and neutral portrayals of stuttering the participants' ratings will be significantly different between the two groups.

2) Do the perceptions that adolescents have toward PWS change after they view negative or neutral portrayals of PWS? Similar to the hypothesis above, it is predicted that participants exposed to either video sample will experience a shift in perceptions after viewing the video sample presentation. Snyder (2001) and Flynn and St. Louis (2011) both found that participants experienced some perceptual changes from pre- to post-testing given a video presentation.

3) Do differences exist between male and female perceptions of PWS before and after viewing portrayals of PWS in major motion pictures? Concerning the effects of gender on perception there have been some studies that found women to be more positive and accepting of PWS (Collins & Blood, 1990; Lee & Manning, 2010), however these studies were all conducted with adult listeners. Other studies, including many done with children and adolescent listeners, found conflicting results showing no significant differences in how males and females perceive PWS (Evans, Healey, Kawai, & Rowland, 2008; Hartford & Leahy, 2007; St. Louis, 2011; Von Tiling, 2011). As Evans et al. (2008) and Hartford & Leahy (2007) conducted studies that focused on adolescents and children, it is predicted that results from this study will follow a similar pattern and show no significant differences between male and female perceptions as the current study is recruiting adolescent participants.

Chapter Three

Method

Participants

Participants were recruited from two junior high schools in the Puyallup School District in Washington (see Appendix I for HSRC Approval). This district includes families of varied social economic status, with approximately 39% of this school district taking free or reduced lunch as of 2013 (Puyallup School District, 2014). The district's enrollment is composed of 51% males and 49% females and approximately 65% of the district is Caucasians, followed by Hispanic (13%), Asian/Pacific Islander (10%), African-American (4%), Native Americans (2%) and other (6%) as of 2012 (Puyallup School District, 2014). It is estimated that 450 participants were given consent forms to take home. From that 450, a total of 267 participants from regular education classrooms in grades 7, 8 and 9 returned signed parent consent forms and completed testing procedures. Participant data was analyzed if the participant or teacher reported the student was performing at grade-level, did not receive special education services for reading or writing, had normal or corrected hearing and vision, was between the ages of 12 and 15, and English was his or her primary language.

Participants were also asked to indicate if they stuttered, had a family member who stutters, or had a close friend who stutters. Data from participants who stuttered or had a family member or close friend who stutters, were not analyzed in order to obtain a typical perception of stuttering and to reduce the impact that familiarity with stuttering has on attitudes about stuttering (Woods & Williams, 1976). As a result, the data of 19 participants was not analyzed because they did not meet one or more of these criteria. Classrooms of

participants were randomly assigned to view one of two video samples resulting in an unequal number of male and female participants and an unequal number of participants who viewed each video sample. In order to analyze an equal number of male and female participants as well as an equal number of participants per condition, data from 48 participants were not analyzed. These participants were randomly selected from groups of males and females from each condition As a result; data from a total of 200 participants were analyzed (see Appendix O for Participant Characteristic Tables).

The participants consisted of 46 twelve-year-olds (Negative=25; Neutral=21), 63 thirteen-year-olds (Negative=41; Neutral=22), 65 fourteen-year-olds (Negative=24; Neutral=41), and 26 fifteen-year-olds (Negative=10; Neutral=16). Sixty-seven participants were enrolled in 7^{th} grade (Negative=36; Neutral=31), 76 participants were enrolled in 8^{th} grade (Negative=45; Neutral=31), and 57 participants were enrolled in 9^{th} grade (Negative=19; Neutral=38). An equal number of males and females participated in the study. Fifty males were exposed to the negative sample and 50 to the neutral video samples. Fifty females were exposed to the negative sample and 50 to the neutral video sample. This led to a total of 200 participants. Participants identified as the following ethnicities: 129 as Caucasian (64.5%), 18 as Asian (9%), 14 as Hispanic (7%), 13 as African-American (6.5%), 12 as Pacific Islander (6%), 10 as Native American (5%), and 4 as Other (2%).

Video Clips

Video clips were taken from major motion pictures that were believed to represent "positive" and "negative" portrayals of stuttering (see Appendix B for a List of Films used and Appendix E for Copyright and Fair Use information). Films used to identify video clips

were feature length and produced by a motion picture studio for profit and widespread distribution. Widespread distribution was defined as available for home viewing through movie rental companies like Netflix or Blockbuster (Black & Pretes, 2007). The video clips were created using EmicSoft video converter software. Movies used ranged in motion picture ratings from PG to R. Therefore, each video clip was screened for child appropriateness using the standard motion picture rating system (G= all ages may watch; PG= parental guidance is suggested; PG-13= not recommended for a younger audience but not restricted; R= restricted to an older audience unless accompanied by an adult). Video clips that were rated to be PG-13, R, or not child appropriate (i.e., containing violence, nudity, or explicit language) by 31 adults and a consensus among the investigators of the study, were not shown to participants. Consent forms informed the parents and the participants about the rating process.

Pilot testing of each video clip was completed to determine if the video clip was perceived to be a "positive" or "negative" portrayal of stuttering. To accomplish this, 66 video clips taken from 15 major motion pictures containing stuttering characters were presented and rated by 31 adults. All raters were master level speech-language pathology students in the Western Washington University program. Raters assessed the portrayal of stuttering in each clip using a 10-point scale (1 = very negatively to 10 = very positively; see Appendix A for the Pilot Testing Form). Each video clip was then descriptively categorized as "positive" (7.3-10), "neutral" (4.7-7.2), or "negative" (1 - 4.6). Video clips that were near the median of the clips rated or were deemed inappropriate for children were not included in the video samples.

Video Samples

Two video samples were created so that participants were exposed to either a sample of more negative portrayals of stuttering or a sample of more positive portrayals of stuttering (see Appendix B for Video Set Information). The video clips rated as more positive were compiled into a neutral video sample, as the average ratings of the clips in this set were not within the positive rating range of 7.3-10. The video clips rated as more negative were compiled into a negative video sample. All video samples were compiled using iMovie video editing software. The video clips were randomly ordered in each video sample with a black screen briefly appearing to mark the beginning and ending of each individual video clip. Each video sample was saved as an m4v video file. Video samples were uploaded using a flash drive to the HP Probook 450 in each classroom. The samples were projected to each class on the projection screen at the front of the classroom using a Hitachi CP-S335 multi-media LCD projector.

The negative video sample was 12 minutes and 50 seconds in length and contained 20 video clips taken from the following major motion pictures: *The King's Speech, A Fish Called Wanda, Rocket Science, Glory, One Flew Over the Cuckoo's Nest, The Last Castle, Primal Fear, The Cowboys,* and *Harry Potter and The Sorcerer's Stone*. The clips used in the negative video sample ranged in length from 12 seconds to 1 minute and 43 seconds. The mean rating of the negative video sample was 2.84 with a standard deviation of .86. The neutral video sample was 12 minutes and 59 seconds in length and contained 16 video clips taken from the following major motion pictures: *The King's Speech, Primal Fear, The Last Castle, Rocket Science, Men of Honor, Glory, One Flew Over the Cuckoo's Nest, Harry Potter and the Sorcerer's Stone, Space Jam,* and *Enigma*. The clips used in the more positive

video sample ranged in length from 9 seconds to 2 minutes and 13 seconds. The clips used in the neutral video sample had a mean rating of 5.95 with a standard deviation of .74. A comparison of the two video samples indicated they were significantly different, $F(1, 34) = 132.88$; $p = <.001$.

Instrumentation

A bipolar adjective scale was used to determine how adolescents perceive the personality traits of PWS (see Appendix M and Appendix N for Surveys Used). Bipolar adjective scales have been used by many studies to measure listener's perceptions of PWS (Collins & Blood, 1990; Franck et al., 2003; Gabel, 2006; Lee & Manning, 2010; Von Tiling, 2011; Wood & Williams, 1976) and have also been used with adolescents to measure listener perceptions of speaker's personality traits (Franck et al., Lass et al. 1991; 1993). The scale used in the current study consisted of a 12-item bipolar adjective rating scale that was used previously by Franck et al. (2003) to measure adolescents' attitudes towards the personality traits of PWS. The bipolar pairs were appropriate for adolescents (e.g. afraid/brave) and were assigned to the left and right columns on the survey. The positive items (e.g., brave) were placed at the high end of the scale (i.e., a 7 on the scale) and negative items (e.g., afraid) were placed at the low end of the scale (i.e., a 1 on the scale). A seven-point scale appeared between each pair. Equal intervals on the scale were then numbered one through seven. The numbers allowed participants to rate how much they agreed with the statement "People who stutter are…" (e.g., if he/she thought PWS are brave a 6 or 7 may have been circled, if he/she thought PWS were afraid a 1 or 2 may have been circled, or if he/she thought PWS were neither brave or afraid a 4 may have been circled). Before beginning the pre-survey

participants were given a brief description of stuttering behaviors so that all participants were working from the same understanding of the dysfluency.

Video Presentation and Data Collection Procedures

Six individual classes from each grade 7, 8, and 9 participated in the study. Parental consent and student assent forms were given to classroom teachers and sent home with potential student participants two weeks prior to the study being conducted. Students were allowed to turn in signed consent/assent forms to their classroom teachers or send signed forms in prepaid envelopes to the researcher at Western Washington University. At the time of participation in the study, any students without signed parental consent were asked to wait in the library or another supervised area while the study was conducted.

Before viewing a video sample all participants in each class were asked to fill out a 12-item semantic differential scale to measure their attitudes about the personality traits of PWS (see Appendix M and Appendix N). As noted earlier, each adjective pair was anchored on a 7-point Likert scale. For the pre-survey a practice item was included (i.e., "Superheroes are…" *strong* being a 7 on the scale and *weak* being a 1). Participants were instructed to choose the number corresponding to the trait that they believed most accurately described their perceptions of superheroes. The researcher went through this item with the participants to ensure that all students knew how to appropriately use the semantic differential scale. After completion of the practice item the participants were allowed to complete the other 12 items on the pre-survey (see Instrumentation for detailed information on the survey used). They were instructed to choose the number corresponding to the traits that they believed most accurately described their perceptions of the personality traits of PWS.

After completing the pre-survey, the participants were shown either the negative or neutral video sample while seated at their desks in their classroom. Participants were told that they would not be quizzed on the information in the video sample and not to change any answers on their pre-survey as they would have a chance to fill out another survey following the video. The video samples shown to the classes were counterbalanced in that the showing of a neutral or negative video sample was alternated within each grade. This method enabled a more even distribution of students in each grade level to be exposed to the negative and neutral video samples.

Immediately after viewing the video sample, participants completed the post-survey, which was identical to the pre-survey with the exception of not having a practice item. Similar to the pre-survey instructions, participants were instructed to choose the number corresponding to the traits that they believed most accurately described their perceptions of the personality traits of PWS. The researcher then collected the completed questionnaires for scoring and analysis.

Lastly, participants completed a demographic information form. The demographic information form (see Appendix H) requested information regarding the participant's familiarity with PWS, gender, ethnicity, age, fluency in English, and grade level. The demographic information form also asked if the participant's had any visual or hearing impairments that hindered their ability to watch the video samples and fill out the pre- and post-surveys. After completion of the demographic form, the researcher provided a brief education on stuttering and allowed students to ask questions.

Statistical Analysis

Mean and standard deviation Likert ratings were calculated for each adjective pair pre- and post-video sample presentation for: participants exposed to the negative and neutral video samples (see Table 2) and for males and females (see Table 3). To determine if significant differences exist between the ratings of the video samples and differences between the ratings from males and females, a between groups multivariate analysis of variance (MANOVA) was conducted on the survey ratings before and after viewing a video sample. A Bonferroni correction to the alpha level .05 was used in all post-hoc comparisons for significant main effects. To determine if significant changes exist in survey responses before and after viewing the neutral and negative video samples, a mean Likert rating across the twelve adjective pairs was computed for each participant before viewing the video sample and after viewing the video sample. This resulted in one average rating before and one average rating after the video sample for each participant. Next, a mixed-group analysis of variance (ANOVA) was performed with video sample as the within-group factor and gender as the between-group factor. Effect size values are reported as partial eta squared (η^2).

Chapter Four

Results

Data from survey responses before and after the presentation of the neutral and negative video samples were analyzed to determine the impact of video sample, gender, and the interaction between video sample and gender on survey responses. A seven-point Likert scale was used to measure how strongly participants agreed or disagreed with a statement and 12 adjective pairs (e.g., "People who stutter are… friendly/unfriendly"). Adjective pairs measured participant perceptions of the personality and intelligence characteristics of PWS. Statistical analyses were performed using Statistical Package for the Social Sciences (SPSS).

Before Viewing the Video Samples

The mean ratings for the adjective pairs before viewing a video sample (pre-survey) ranged from 3.58 to 5.18, which indicated more of a neutral than extreme rating of the adjective pairs (see Figure 1). The lowest rated adjective pairs were ***shy***-*outgoing* (3.58), ***unsure***-*confident* (3.72), ***tense***-*relaxed* (3.78), ***not understandable***-*understandable* (3.80), and ***afraid***-*brave* (3.82), and the highest rated adjective pairs were *unfriendly*-***friendly*** (5.18) and *stupid*-***intelligent*** (5.11). A comparison of male and female ratings pre-video set presentation can be seen in Figure 2.

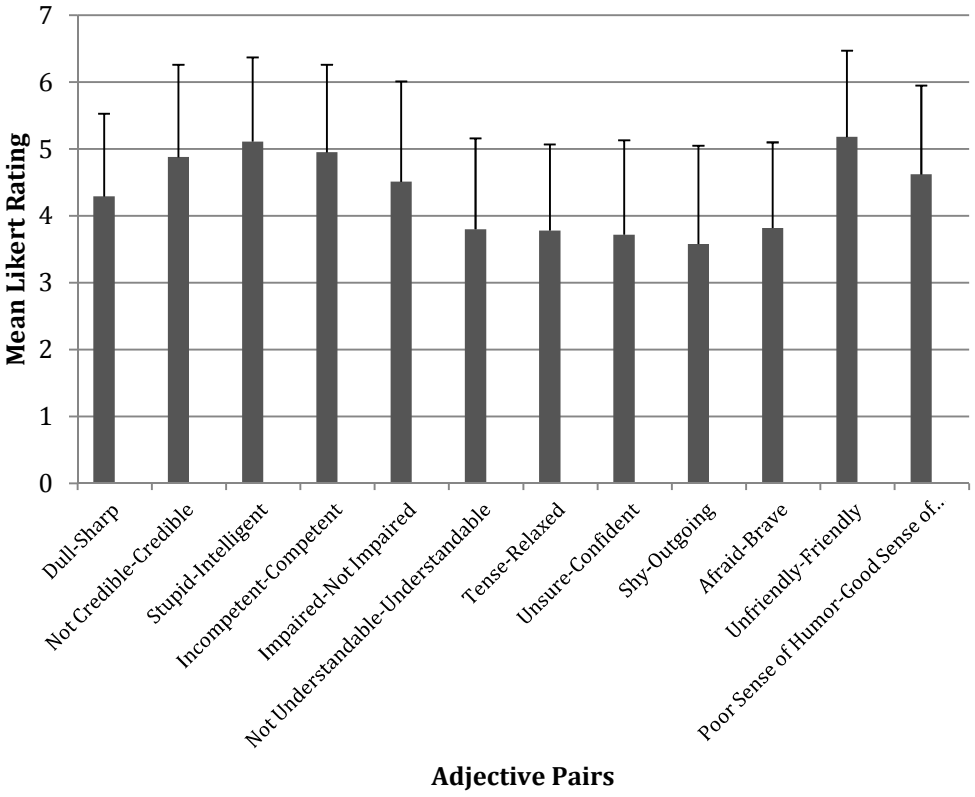

Figure 1. Mean Likert ratings across participants before viewing the video samples.

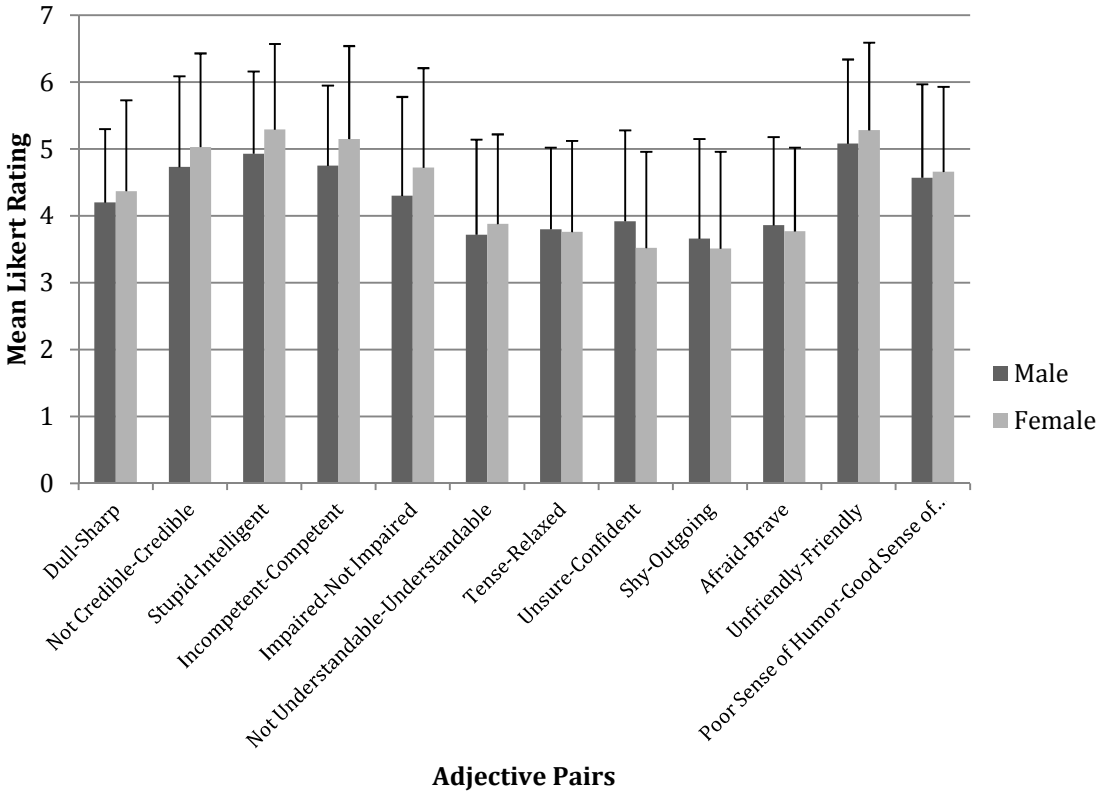

Figure 2. Male versus female ratings pre-video sample presentation.

Video sample and gender statistics. Data was analyzed using a 2 x 2 between groups MANOVA to determine the main effect of gender (male, female) and video sample (negative, neutral) as well as the interaction of gender and video sample on Likert ratings. The interaction between Video Sample x Gender was not significant before viewing the video sample, $F(12, 185) = 1.15$, $p = .320$, power = .65, $\eta^2 = .070$. The main effect of Video Sample, $F(12, 185) = 1.07$, $p = .384$, power = .61, $\eta^2 = .065$, was not significant. Similarly, the main effect for Gender was not significant, $F(12, 185) = 1.57$, $p = .104$, power = .81, $\eta^2 = .092$. These results indicate both groups did not have significantly different perceptions of PWS prior to viewing a video sample. This ensured that any differences found between the

groups after exposure to the neutral and negative video samples were due to the administration of the video samples and not differences between the groups initial perceptions of PWS. A summary of the MANOVA data pre-video set presentation can be seen in Table 1.

Table 1

MANOVA summaries for survey responses pre-video sample presentation for video sample, gender, and interaction.

Source	d.f.	*F*	*p*-Value	Effect size	Observed power
Video Sample	12, 185	1.07	.384	.065	.61
Gender	12, 185	1.57	.104	.092	.81
Video Sample x Gender	12, 185	1.15	.320	.070	.65

After Viewing the Video Samples

The mean ratings for the adjective pairs after viewing a video sample (post-survey) ranged from 2.54 to 5.06, which indicated a more extreme rating of some adjective pairs as compared to pre-survey average ratings (see Figure 3). The lowest rated adjective pairs for those participants who viewed the negative video sample were ***tense***-*relaxed* (2.54*),* ***shy***-*outgoing* (2.91), ***not understandable***-*understandable* (2.95), ***unsure***-*confident* (2.96), and ***afraid***-*brave* (2.92). The lowest adjective pairs for those participants who viewed the neutral video sample were ***tense***-*relaxed* (3.56), ***shy***-*outgoing* (3.84), and ***not understandable***-*understandable* (3.97). The highest rated adjective pair for those participants exposed to the negative video sample was *unfriendly*-***friendly*** (5.06). The highest rated adjective pairs for

participants exposed to the neutral video sample were *not credible-**credible*** (5.02), *incompetent-**competent*** (5.05), *stupid-**intelligent*** (5.44), and *unfriendly-**friendly*** (5.44). For a comparison of male and female ratings post-video sample presentation see Figure 4.

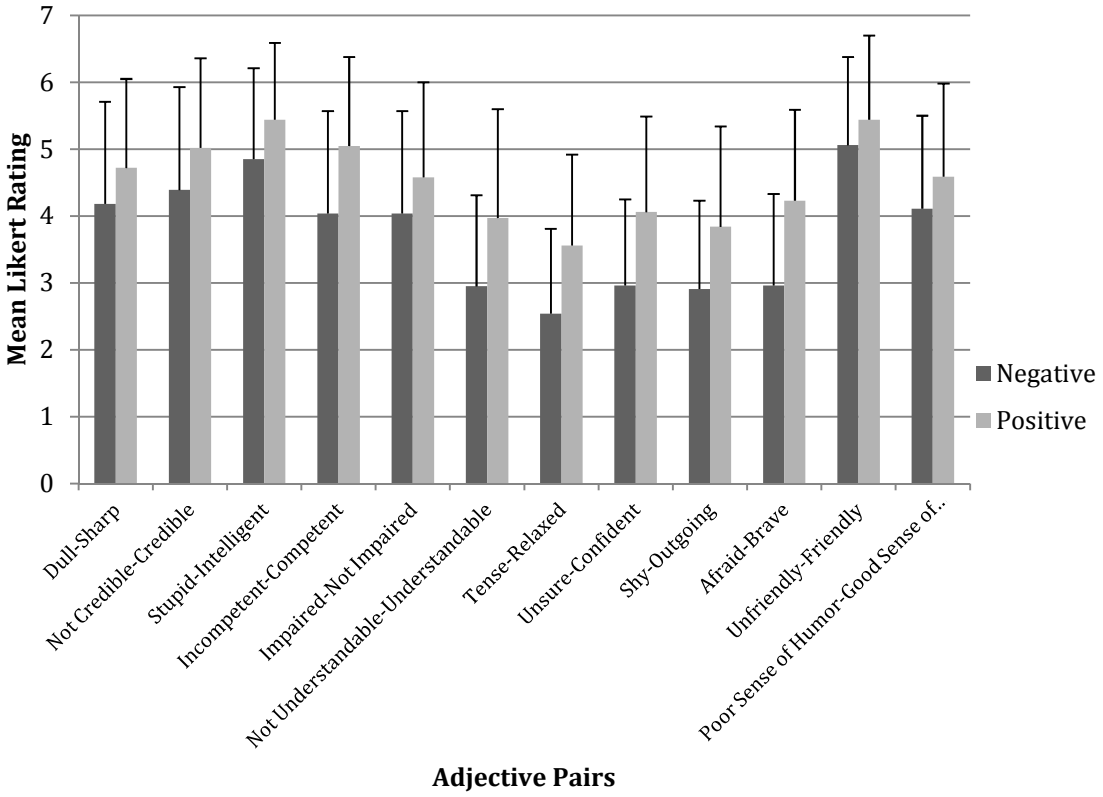

Figure 3. Comparison of the ratings of participants exposed to negative and neutral video samples post-video sample exposure.

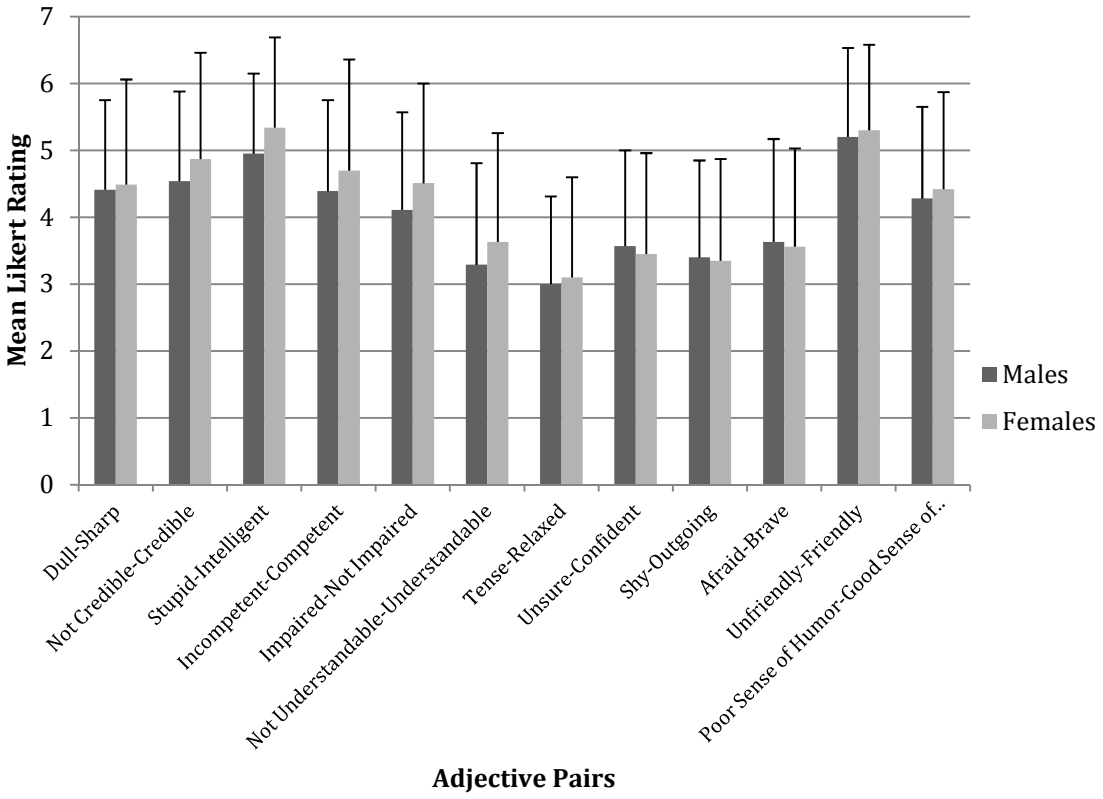

Figure 4. Male versus female ratings post-video sample presentation.

Video sample and gender statistics. Data from participants after exposure to the video sample was analyzed using the same statistical analysis as the pre-video sample data was, using a 2 x 2 between groups MANOVA to determine the main effect of gender (male, female) and video sample (negative, neutral) as well as the interaction of gender and video sample on Likert ratings. No significance was found for the interaction of Video Sample X Gender post-video sample presenation, $F(12, 185) = .75$, p = .703, power = .43, $\eta^2 = .046$.

The main effect of Video Sample was significant, $F(12, 185) = 5.45$, $p = .000$, power = 1.00, $\eta^2 = .261$. Post hoc testing identified significant differences for all adjective pairs: "dull-sharp" (p = .009); "not credible-credible" (p = .002); "stupid-intelligent" (p = .001);

"incompetent-competent" (p = .000); "impaired-not impaired" (p = .009); "not understandable-understandable" (p = .000); "tense-relaxed" (p = .000); "unsure-confident" (p = .000); "shy-outgoing" (p = .000); "afraid-brave" (p = .000); "unfriendly-friendly" (p = .039); and "poor sense of humor-good sense of humor" (p = .016). Mean participant survey ratings before (pre-survey) and after (post-survey) viewing the video samples are shown in Table 2.

The main effect for Gender was not significant, $F(12, 185) = .92$, p = .533, power = .52, $\eta^2 = .056$. Therefore, male and female junior high students did not differ in their perceptions of the personality traits of PWS either pre- or post-video sample presentation. A comparison of male and female ratings pre- and post-video sample presenation can be seen in Table 3. A summary of the MANOVA data post-video sample presentation can be seen in Table 4.

Table 2

Means and standard deviations of Likert ratings before and after viewing the video samples from negative, neutral, and combined participant groups.

Adjective Pairs	Pre-Survey Negative *M* (SD)	Pre-Survey Positive *M* (SD)	Pre-Survey Combined *M* (SD)	Post-Survey Negative *M* (SD)	Post-Survey Positive *M* (SD)	Post-Survey Combined *M* (SD)
Dull-Sharp	4.19 (1.32)	4.38 (1.15)	4.29 (1.24)	4.18 (1.53)	4.72 (1.33)	4.45 (1.46)
Not Credible-Credible	4.64 (1.58)	5.12 (1.11)	4.88 (1.38)	4.39 (1.54)	5.02 (1.34)	4.71 (1.48)
Stupid-Intelligent	5.06 (1.30)	5.16 (1.23)	5.11 (1.26)	4.85 (1.36)	5.44 (1.15)	5.15 (1.29)
Incompetent-Competent	4.86 (1.39)	5.04 (1.22)	4.95 (1.31)	4.04 (1.53)	5.05 (1.33)	4.55 (1.52)
Impaired-Not Impaired	4.58 (1.62)	4.44 (1.37)	4.51 (1.50)	4.04 (1.53)	4.58 (1.42)	4.31 (1.49)
Not Understandable-Understandable	3.76 (1.32)	3.84 (1.43)	3.80 (1.36)	2.95 (1.36)	3.97 (1.63)	3.46 (1.58)
Tense-Relaxed	3.68 (1.43)	3.88 (1.13)	3.78 (1.29)	2.54 (1.27)	3.56 (1.36)	3.05 (1.41)
Unsure-Confident	3.61 (1.52)	3.83 (1.30)	3.72 (1.41)	2.96 (1.29)	4.06 (1.43)	3.51 (1.47)
Shy-Outgoing	3.40 (1.58)	3.77 (1.33)	3.58 (1.47)	2.91 (1.32)	3.84 (1.50)	3.38 (1.48)
Afraid-Brave	3.73 (1.41)	3.90 (1.14)	3.82 (1.28)	2.96 (1.37)	4.23 (1.36)	3.59 (1.50)
Unfriendly-Friendly	5.20 (1.28)	5.16 (1.30)	5.18 (1.29)	5.06 (1.32)	5.44 (1.26)	5.25 (1.30)
Poor Sense of Humor-Good Sense of Humor	4.56 (1.39)	4.67 (1.28)	4.62 (1.33)	4.11 (1.39)	4.59 (1.39)	4.35 (1.41)

Table 3

Means and standard deviations of males and females pre- and post-survey.

Adjective Pairs	Pre-Survey Male *M* (SD)	Pre-Survey Female *M* (SD)	Pre-Survey Combined *M* (SD)	Post-Survey Male *M* (SD)	Post-Survey Female *M* (SD)	Post-Survey Combined *M* (SD)
Dull-Sharp	4.20 (1.10)	4.37 (1.36)	4.29 (1.24)	4.41 (1.34)	4.49 (1.57)	4.45 (1.46)
Not Credible-Credible	4.73 (1.36)	5.03 (1.40)	4.88 (1.38)	4.54 (1.34)	4.87 (1.59)	4.71 (1.48)
Stupid-Intelligent	4.93 (1.23)	5.29 (1.28)	5.11 (1.26)	4.95 (1.20)	5.34 (1.35)	5.15 (1.28)
Incompetent-Competent	4.75 (1.20)	5.15 (1.39)	4.95 (1.31)	4.39 (1.36)	4.70 (1.66)	4.55 (1.52)
Impaired-Not Impaired	4.30 (1.48)	4.72 (1.49)	4.51 (1.50)	4.11 (1.46)	4.51 (1.49)	4.31 (1.49)
Not Understandable-Understandable	3.72 (1.42)	3.88 (1.34)	3.80 (1.38)	3.29 (1.52)	3.63 (1.63)	3.46 (1.58)
Tense-Relaxed	3.80 (1.22)	3.76 (1.36)	3.78 (1.29)	3.00 (1.31)	3.10 (1.50)	3.05 (1.41)
Unsure-Confident	3.92 (1.36)	3.52 (1.44)	3.72 (1.41)	3.57 (1.43)	3.45 (1.51)	3.51 (1.47)
Shy-Outgoing	3.66 (1.49)	3.51 (1.45)	3.58 (1.47)	3.40 (1.45)	3.35 (1.52)	3.38 (1.48)
Afraid-Brave	3.86 (1.32)	3.77 (1.25)	3.82 (1.28)	3.63 (1.54)	3.56 (1.47)	3.59 (1.50)
Unfriendly-Friendly	5.08 (1.26)	5.28 (1.31)	5.18 (1.29)	5.20 (1.33)	5.30 (1.28)	5.25 (1.30)
Poor Sense of Humor-Good Sense of Humor	4.57 (1.40)	4.66 (1.27)	4.62 (1.33)	4.28 (1.37)	4.42 (1.45)	4.35 (1.41)

Table 4

MANOVA summaries for survey responses post-video sample presentation for video sample, gender, and interaction.

Source	d.f.	*F*	*p*-Value	Effect size	Observed power
Video Sample	12, 185	5.45	.000	.261	1.00
Gender	12, 185	.92	.533	.056	.52
Video Sample x Gender	12, 185	.75	.703	.046	.43

Within Subject Changes in Perceptions

A mean Likert rating across the twelve adjective pairs was computed for each participant before viewing the video sample and after viewing the video sample resulting in one pre-rating and one post-rating for each participant. Next, a mixed-group factorial ANOVA was performed for participants who viewed the negative video sample and the neutral video sample. Video sample was used as the within-group factor with gender acting as the between-groups factor.

Researchers examined the effects of the neutral video sample and gender on Likert ratings. Results showed there was not a significant interaction between the neutral video sample and gender, $F(1, 98) = .001$, $p = .973$, $\eta^2 = .000$, power = .05. There was no significant main effect of the neutral video sample on pre- and post-ratings, $F(1, 98) = 2.249$, $p = .137$, $\eta^2 = .022$, power = .32 (see Figure 5). There was also no significant main effect of gender on the ratings, $F(1, 98) = 1.303$, $p = .257$, $\eta^2 = .01$, power = .20. Results are summarized in Table 5.

Table 5

ANOVA summaries for survey responses pre- to post-neutral video sample presentation for video sample, gender, and interaction.

Source	d.f.	*F*	*p*-Value	Effect size	Observed power
Video Sample	1, 98	2.249	.137	.022	.32
Gender	1, 98	1.303	.257	.010	.20
Video Sample x Gender	1, 98	.001	.973	.000	.05

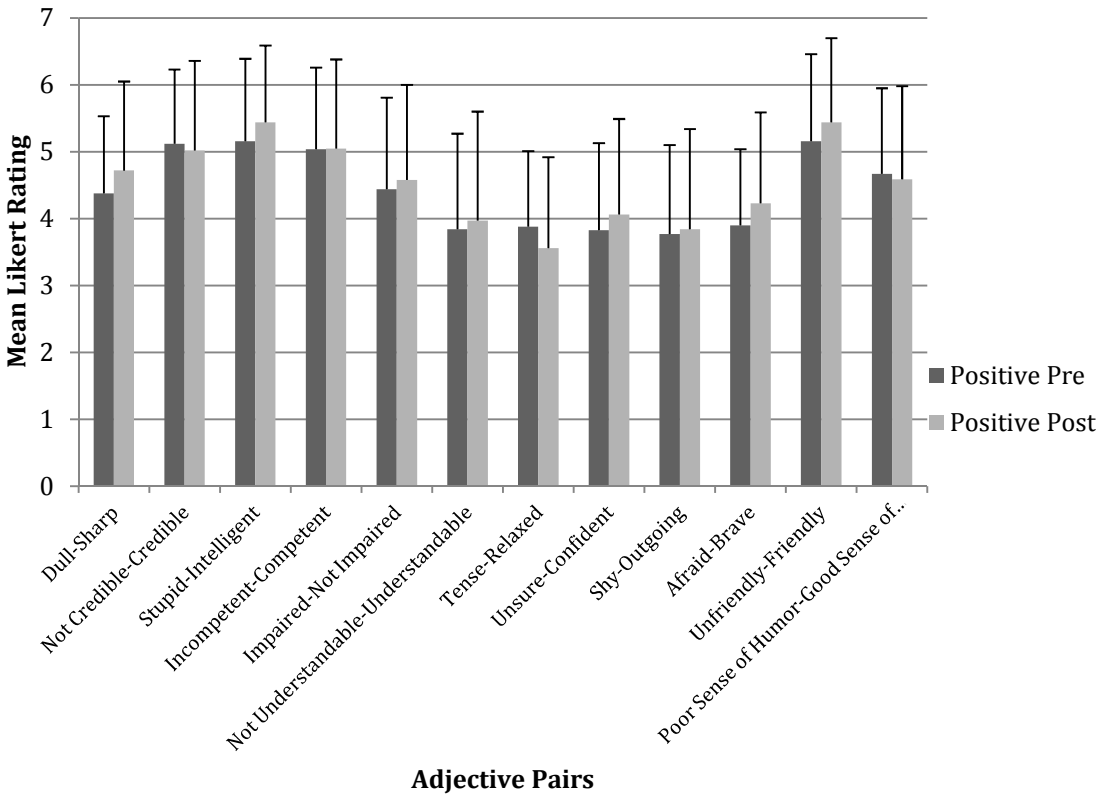

Figure 5. The ratings of participants exposed to the neutral video set pre- versus post-video sample presentation.

A mixed-group factorial ANOVA was performed to examine the effects of the negative video sample and gender on Likert ratings. Results showed there was no significant interaction between the negative video sample and gender, $F(1, 98) = .301$, $p = .583$, $\eta^2 = .003$, power = .08. There was a significant main effect of the negative video sample on pre- and post-ratings, $F(1, 98) = .301$, $p < .001$, $\eta^2 = .327$, power = 1.00, with ratings decreasing after participants viewed the negative video sample (see Figure 6). There was no significant main effect of gender on the ratings, $F(1, 98) = .268$, $p = .606$, $\eta^2 = .003$, power = .08. Results are summarized in Table 6.

Table 6

ANOVA summaries for survey responses pre- to post-negative video sample presentation for video sample, gender, and interaction.

Source	d.f.	*F*	*p*-Value	Effect size	Observed power
Video Sample	1, 98	.301	<.001	.327	1.00
Gender	1, 98	.268	.606	.003	.08
Video Sample x Gender	1, 98	.301	.583	.003	.08

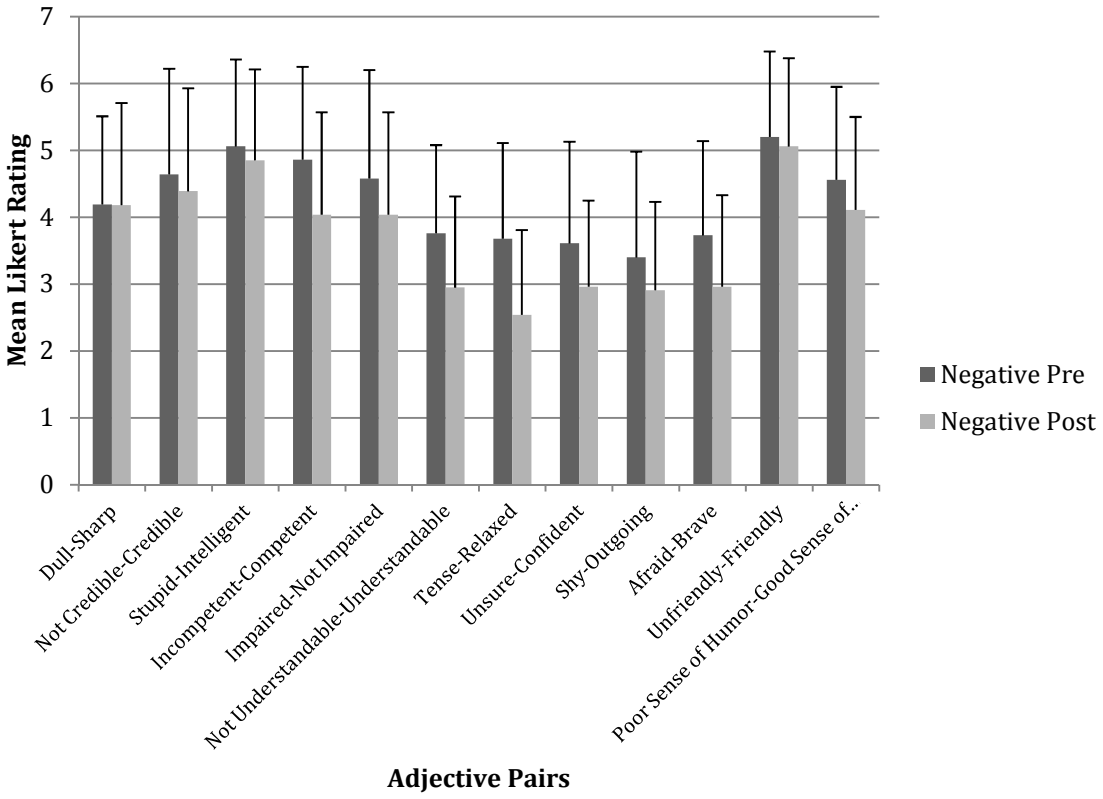

Figure 6. The ratings of participants exposed to the negative video set pre- versus post-video sample presentation.

Chapter Five

Discussion

The purpose of this study was to examine the effects of portrayals of PWS in major motion pictures on adolescents' perceptions of PWS. Specifically, the researcher conducted a survey of adolescents' perceptions of the personality and intelligence traits of PWS, both before and after exposure to video stimuli. The stimuli included 36 clips taken from 11 major motion pictures, a subset of entertainment media. Main findings are discussed followed by clinical implications, limitations of the study, and considerations for future research.

Comparison of Current Study to Research within the Discipline

Adolescents' baseline perceptions of PWS. A bipolar adjective scale was used to examine adolescents' perceptions of the personality traits of PWS both before being exposed to video samples, and after being exposed to negative and neutral video samples. This study found that using a bipolar adjective scale is an effective way to measure baseline listener perceptions and changes in listener perceptions of the personality traits of PWS. These findings support other studies in which bipolar adjective scales were used to measure the perceptions that children and adolescent listeners hold towards stuttering and other speech disorders. Lass et al. (1991; 1993) used a bipolar adjective pair scale and found that the presence of a voice disorder or dysarthric speech negatively affected children listeners' perceptions of the personality traits of voice-disordered and dysarthric children. Freeby and Madison (1989) found that the personality traits and intelligence of the speakers with defective /r/s were rated significantly lower than the speakers with normal articulation. These

studies along with findings from the current study provide evidence that bipolar adjective pairs provide a valuable measure of listener perceptions of the personality traits of a speaker with disordered speech.

The pre-survey was taken before participants viewed the stimuli to provide a baseline of participant perceptions. Results indicated that adolescents do have preconceived ideas of the personality traits of PWS. Adolescents believed PWS were “shy”, “unsure”, “tense”, “not understandable”, and “afraid”. Previous researchers found similar results, concluding that adolescents hold stereotypical ideas about the personality traits of PWS (Davis, Howell, & Cooke, 2002; Flynn & St. Louis, 2011; Franck et al., 2003). Davis, Howell, and Cooke (2002) found that adolescents who stutter were more likely to be seen as a “bully victim” and “less assertive” than fluent peers. A study conducted by Flynn and St. Louis (2011) found that adolescents perceived PWS as “shy”, “nervous”, and “having psychological problems” (p. 117). Franck et al. (2003), who conducted a study similar to the current one, found that even younger children perceived PWS as more “shy” and “dull” than fluent speakers. Evans et al. (2008) found that adolescents perceived a peer with a sever stutter of 10% or 14% syllables stuttered to have a difficult time fitting into school. Researchers conducting studies with preschoolers and school age children found that children as young as 3 years of age prefer the speech of fluent peers and puppets rather than dysfluent counterparts (Griffin & Leahy, 2007; Langevin, Packman, & Onslow, 2010).

While the current study did not have any participants who had a fluency disorder themselves, findings by other researchers indicated that the stuttering stereotype, including being less understandable and more unconfident than fluent peers, is prevalent among both adolescents who stutter and their fluent counterparts. Blood, Blood, Tellis, & Gabel (2003)

found that, adolescents who stutter, find themselves to hold closer to these stereotypical stuttering characteristics than fluent peers did. A study conducted by Mulcahy, Hennessey, Beilby, and Byrnes (2008) compared the severity of anxiety in adolescents who stutter and their fluent peers. Adolescents who stuttered rated themselves as having significantly higher state and trait anxiety and difficulty communicating than their fluent peers did. Together these studies further support the data collected by this study indicating that adolescents have preconceived perceptions about PWS, are highly aware of dysfluencies, and associate negative traits such as "shy", "bully victim", "unintelligent", and "not understandable" with students who are dysfluent.

Researchers examining adult listener perceptions of the personality traits of PWS add to the findings of the current study indicating that stereotypical perceptions of PWS held by adolescents are similar to the perceptions held by adults. Collins and Blood (1990) found that not acknowledging stuttering decreased listener perceptions of PWS across all adjective pairs. Lee and Manning (2010) found that fluent peers rated PWS without modification or acknowledgment negatively. Gabel (2006) found that the more severe the dysfluency of the speaker, the more negative listener perceptions were. Finally, Von Tiling (2011) concluded, "verbal avoidance behaviors like interjections, revision, incomplete phrases, and pauses make PWS look more incompetent" (p. 169) to their fluent peers causing them to rate their personality traits more negatively.

The current study also found that adolescents initially rated PWS as being "friendly" and "intelligent". This finding contradicts studies done with adults that found adult listeners rated PWS as being unfriendly or less intelligent. Woods and Williams (1976) found that adults used "undesirable" traits, such as "unfriendly" to describe PWS significantly more

than they used these terms to describe people who did not stutter. Collins and Blood (1990) found that adults rated PWS to be "unsociable". Healey et al. (2007) found that adults perceived PWS and did not acknowledge their stuttering to be less friendly and less likeable than dysfluent speakers who acknowledged their dysfluencies. In this way the current study indicates that there may be a positive shift in the way stuttering is perceived.

Influence of video sample presentation on perceptions. The primary objective of this study was to determine if major motion picture's depictions of PWS would influence adolescents' perceptions of PWS. This objective was measured in three ways. First, between-groups changes were examined by finding if there were differences between the perceptions of those exposed to the neutral and those exposed to the negative video samples post-stimuli presentation. Then changes were examined within-subject by examining if individual participants had changes in perceptions from pre- to post-video sample presentation. Finally, changes in perception based on gender were examined.

Between groups changes in perceptions. One question asked during this study was if adolescents who viewed neutral portrayals of PWS perceived PWS differently than adolescents who viewed negative portrayals? Results indicated that the presentation of video samples containing entertainment media led the group exposed to the neutral sample and the group exposed to the negative sample had a significant difference in participants' perceptions of PWS. This indicates that the video samples did change participant perceptions as the two groups had similar perceptions of PWS before the video samples were presented. There is no current research examining differences between groups exposed to negative or positive portrayals of stuttering; however these results support previous research that found there are

significant between-groups differences based on media presentations of PWS with different types of dysfluency and severities of dysfluency. A study conducted by Von Tiling (2011) found that there were significant differences between groups exposed to one of four videos depicting a conversation in which one speaker's speech was stuttered, stuttered and hesitant, hesitant, or prolonged. Studies conducted by Franck et al. (2003), Evans et al. (2008), and Hartford and Leahy (2007) found that there were significant differences between groups of children and adolescents exposed to different severities of stuttering from none to 14% SS or severe stuttering. Together these studies, along with the current study, indicate that video and audio media stimuli can cause significant differences in the way groups perceive PWS.

Within subject changes in perceptions. The second research questions asked if the perceptions that adolescents have toward PWS change after they view negative or neutral portrayals of PWS. Those participants who viewed the negative video sample experienced a significant shift in perceptions after viewing the video sample. Their perceptions were significantly more negative than before viewing the sample. Participants who viewed the neutral video sample experienced a subtle shift in perceptions. Their perceptions of PWS became slightly more positive after viewing the video sample; however these samples did not reach significance. These results indicate that the way stuttering is portrayed in media has a dynamic affect on perceptions. More negative portrayals of stuttering lead to more negative perceptions of PWS while more positive portrayals of stuttering in turn lead to more positive perceptions of PWS. These findings support the results of other studies that have also found shifts in listener perceptions of stuttered speech following media stimuli.

A study done by Snyder (2001) found that changes in the participants' perceptions were subtle and highly specific to the documentaries showed. For example after participants

viewed the documentary *Speaking of Courage*, the participants reported an increase in the belief that operant therapy for stuttering was effective. Flynn and St. Louis (2011) found more generalized shifts in perceptions given both oral and video stimuli. Participants had more positive views of PWS following the viewing of a documentary style reality television show. As both of the above studies used documentary style media, the current study further adds to this body of research by examining shifts in perceptions following a different style of media. The results from the current study are more general in nature, indicating that overall more negative or more positive portrayals of stuttering led to shifts in perception on all or most adjective pairs presented, given the presentation of scenes from a major motion picture. Collectively, these studies indicate that media may be an important factor in the formation and change of listener perceptions of stuttered speech, promoting either negative or positive perceptions of stuttering depending on the portrayal of PWS.

Male and female changes in perceptions. The final research questions asked if differences exist between male and female perceptions of PWS before and after viewing portrayals of PWS in major motion pictures. The current study analyzed male and female participant ratings of the personality traits of PWS. Male and female ratings of the personality traits of PWS were similar both pre- and post-video sample presentation. Both males and females perceived PWS as “not understandable”, “tense”, “unsure”, “shy”, and “afraid”. It was also noted that the amounts of change in perceptions from pre- to post-video sample presentation were similar for both males and females. Females and males shown the negative video sample experienced more negative shifts in perceptions, while females and males exposed to the neutral video sample experienced a subtler positive shift in perception of PWS. The current study supports the literature regarding gender differences in children

and adolescents perceptions of PWS (Evans, Healey, Kawai, & Rowland, 2008; Hartford & Leahy, 2007; Langevin, 2009). The current literature on this subject indicates that there are no significant differences between male and female children and adolescents and their perceptions of PWS (Evans et al., 2008; Hartford & Leahy, 2007; St. Louis, 2011; Von Tiling, 2011). Collectively these studies show consistent findings according to gender differences among both children and adolescents.

Comparison of Current Study to Research in Other Disciplines

The current study indicates that media influences adolescents. In this research, adolescents' perceptions of stuttering were significantly more negative after being exposed to negative motion picture movie representations of PWS. Researchers in the fields of psychology and communications have also examined how media plays a role in the development and persistence of gender, beauty, and aggression behaviors in adolescents (Anderson, 2004; Bissell & Hays, 2010; Dowler, 2002; Groesz, Levine, & Murnen, 2002; Martins & Harrison, 2012; Shibuya, Sakamoto, Ihori, & Yukawa, 2008). Martins and Harrison (2012) found that television exposure predicted self-esteem in adolescents, particularly for girls and children of color, as media portrayed both female and ethnic stereotypes and by doing so created a standard for the perception of these groups. Groesz, Levine, and Murnen (2002) conducted a meta-analysis of 25 studies that examined the affect of on media on body image and found that media had an almost immediate effect on body image and emotional well-being. It was also stated that media's influence on perceived body satisfaction was greater in adolescent participants, less than 19 years of age. Findings from

the current study support these studies, indicating that adolescents are open to changing their perceptions and readily do so given a media stimulus.

The current research also examined if media contributed to the stereotypical perceptions of PWS. It was found that after being exposed to negative portrayals of stuttering adolescents found people to believe that PWS are "shy", "tense", and "afraid". These personality traits are stereotypical traits associated with stuttering. Psychology, communications, and media studies are all fields that have also examined how media influences the development of stereotypes and behaviors associated with disorders in adults (Angermeyer, Dietrich, Pott, & Matschinger, 2005; Black & Pretes, 2007; Farnall & Smith, 1999; Foss, 2013; Hux, Rogers, & Mongar, 2000; Stuart, 2006). A study conducted by Hux, Rogers, & Mongar (2000) found that most adults gained their information regarding stroke from media such as magazines and television. Foss (2013) found that depictions of hearing loss in television shows were highly inaccurate. Together these studies indicate that portrayals of disorder in various kinds of media are inaccurate, but are many peoples' main resource to learn information regarding disorders. Results from the current study contribute to these findings, indicating that portrayals of disorder in a media sample are used by adolescents to form and create perceptions of PWS, regardless of whether these depictions are reflective of the actual disorder. This indicates that media may be a factor in the creation and persistence of stuttering stereotypes.

Clinical Implications

Results from the current study show that media can influence adolescents' perceptions of PWS. This has many clinical implications regarding education about

stuttering. As stated before, there is a link between stuttered speech, listener perceptions, and possible negative impact that may come from negative listener perceptions. Blood and Blood (2004) found that adolescents who stutter are at a greater risk of bullying, as forty-three percent of adolescents who stuttered experienced bullying at least once a week compared to eleven percent of fluent peers. Iverach and Rapee (2014) and Mulcahy, Hennessey, Beilby, and Byrnes (2008) both found that adolescents who stutter are also at a greater risk of social anxiety due to their dysfluencies. Van Borsel, Brepoels, and De Coene (2011) found that older adolescents are less likely to engage in a romantic relationship with someone who has stuttered speech. A study conducted by Davis, Howell, and Cooke (2002) found that adolescents who stuttered were more likely to be rated as unpopular by their classmates, indicating that students who stutter may have a more difficult time fitting in with their peers. The current study's findings indicate that media and the influence media has on listeners' perceptions of PWS is an important aspect to address when educating others about stuttering as it may have an impact on the formation of stuttering stereotypes.

Understanding that media may have an impact on the development of perceptions of stuttering is key to knowing how to shift perceptions of stuttering. It is also a strong piece of information that PWS may use to open up a discussion about stuttering. A large piece, of some stuttering treatment programs, is to accept and acknowledge stuttering. In this way PWS may self-advocate for themselves by opening up about stuttering and beginning to educate their peers. Media influences on the perception of disorder, body image, and stuttering is an interesting and easily shared piece of information that can begin an important dialogue. PWS can the turn this conversation into a broad discussion about stuttering and in this way further spread education about stuttering.

The current research also provides evidence that education about stuttering is needed in schools. Adolescents in the current study held stereotypical views of PWS before any video sample was presented. Participants in this study believed that PWS were "shy", "tense", and "afraid". Langevin has conducted research examining how stuttering education in the formative years of childhood and adolescents may aid in decreasing the negative impacts of listener perceptions of stuttered speech. The Teasing and Bullying: Unacceptable Behaviour (TAB) program was formulated to decrease bullying in children and adolescents through education about diversity, including a section specifically about stuttering.

The TAB education program does not use multi-media presentations in the program; however the current study provided evidence that media may be an effective tool for shifting the perceptions of adolescents regarding their attitudes towards PWS. As stated previously, results indicated that those adolescents shown the neutral video sample had slight positive shifts in their perceptions of the personality traits of PWS. Given a sample including positively rated video clips students may have a statistically significant positive shift in perceptions. Further research must be done to see if this hypothesis is true; however the current study's findings showing slight shifts in perception given a neutral sample make this line of research compelling.

Limitations

The current study has several limitations that warrant consideration. First, the video clips used in this study were extracted from motion pictures. Gerbner and Grossman (1976) state, "much of the research on media…occurs after a viewer has seen a particular program or even isolated scenes from programs…all such studies…are of limited value because they

ignore a fundamental fact: the world of TV drama consists of a complex and integrated system of characters, events, actions, and relationships whose effects cannot be measured with regard to any single element or program seen in isolation" (p. 181). Therefore, it is possible that stimuli, which used isolated video clips may not fully portray a PWS in a given film because an extracted clip is a limited representation of the character and the arc of that character in regards to the motion picture's story line. As a result, the participants in this study may have developed perceptions of PWS based on a limited number of isolated interactions the character who stutters had with other characters in the film.

A second limitation is that the two video samples did not have the same frequency of stuttering. Although an attempt was made to balance the stuttering severity of the two video samples when they were constructed, it was found that in the negative video sample 16.8% of syllables had a stuttering event and the neutral video sample had a stuttering event on 13.2% of syllables in the sample (see Appendix C and Appendix D for full transcripts of the video samples). Therefore, it is possible that slight differences in stuttering frequency influenced how the participants rated the two video samples, thereby resulting in the negative video sample being perceived more negatively due the frequency of stuttering rather than the portrayal of the PWS. Several researchers have found that the severity of stuttering does change how listeners perceive stuttered speech, however this is for samples with greater differences, such as mild stuttering versus severe stuttering (Gabel, 2006) or a speaker with 5% of syllables versus a speaker with over 10% of syllables stuttered (Evans et al., 2008). Gabel (2006) found that a speaker with a mild stutter was rated significantly more positively than a speaker with a severe stutter. Evans et al. (2008) found that a speaker with syllable stutter under 10% was perceived as having, an easier time speaking and having more smooth

speech, than a speaker with over 10% syllables stuttered. The findings from these studies indicate that the 13.2% syllables stuttered and 16.8% syllables stuttered are close enough in severity that there should not be a significant difference in the way the stuttering severity in the two video samples in this study were viewed.

The results of this study may have also been influenced by a peer bias effect because data was collected with groups of participants rather than individual participants. As a result, participants were in contact with peers throughout the presentation of the video samples and data collection. This may have biased some participants' answers, as they wanted to answer the questions similarly to peers. A study done by Smith, Dodge, Dishion, and McCord (2005) investigated how to accurately examine peer bias in the adolescent age group. Smith et al. (2005) reported in their study that if one peer engages in a behavior, "a high probability exists that other members will do the same" (p. 2). So it may also be possible that if some participants were not participating fully or honestly in the study, their peers would also join in with these same behaviors. The adolescent age group, however, has been shown to be "honest" and "cooperative" (Lintonen, Ahlmström, & Mestso, 2004, p. 364). Good test re-test reliability has also been found within this population in studies examining the self-report of alcohol consumption, medical pains and symptoms, and sexual behaviors (Haugland & Wold, 2001; Lintonen, Ahlmström, & Mestso, 2004; Santelli, Duberstien, Abma, McNeely, & Resnick, 2000). Therefore, it is also possible the reported reliability of this age population worked to balance any possible peer bias effect that may have occurred.

Other limitations were encountered regarding participant selection and participation. One limitation is that participants were not randomly selected. The participants who participated in the study were those participants who returned their signed parent consent

forms. This may have inadvertently biased the participant population. The sample was also not comprehensive regarding ethnicity as the participant sample was largely composed of Caucasians. Between-groups statistics were conducted, and an attempt was made to ensure that the groups were relatively balanced for gender and baseline perceptions of PWS. Participants in both groups were not participant matched for age, ethnicity, or socio economic status, these factors would have further ensured that any changes in perceptions given video stimuli were due to the stimuli and not to differences in between participant groups.

Regarding the generalizibility of these results, the participants included in the study were all enrolled in public junior high schools in the northwest United States. Therefore, results of this study may not generalize to other regions of the United States or other countries. This study, or another study examining how perceptions of stuttering and PWS can be changed, should be conducted with a broader population. Another limitation is that the stimuli included a limited sample of stuttering from major motion pictures and may not generalize to other major motion pictures and forms of media such as television and documentaries. Future research should consider the use of a more inclusive video sample using a wider range of motion pictures depicting stuttering, clips from television shows, and children's cartoons. These different depictions of stuttering, as well as the various visual media, may influence participants in a different way than the current video samples did. Different media other than major motion pictures and television should be used as well to see if there is any variability in the way different subsets of entertainment media affect shifts in perceptions, such as magazines, children's literature, and adult literature.

Future Research

One area that is in need of further investigation is the effect of age on attitude change given a media stimuli. Research has determined that negative perceptions of stuttering can develop as early as three years of age (Langevin, Packman, and Onslow, 2009). These early negative reactions include: preferring a puppet with fluent speech over one with dysfluent speech, identifying dysfluent speech as a difference, and perceiving this difference as negative. Researchers have also found that these early developed, negative, listener perceptions of stuttered speech, mature and increase with age (Ezrati-Vinacour, Platzky, & Yairi, 2001; Giolas & Williams, 1958; Hartford & Leahy, 2007). The results of these studies indicated that the perceptions of younger children are significantly less negative than the perceptions of adolescents, however these studies did not examine if the perceptions of these different age groups were easier or harder to shift given education about stuttering. Both Snyder (2001) and Flynn and St. Louis (2011) conducted their studies examining changes in listener perceptions in older adolescents and university students. Research should be done to examine shifts in perceptions and attitudes of younger adolescents and elementary aged children. If there is a significant difference between the changes in attitudes between older adolescents, younger adolescents, and elementary aged children, this may provide important information as to when education about stuttering, as well as other diversity training, should be conducted for optimal efficacy.

Another area that should be further examined is the effect of a positive video sample on changing listener perceptions. The video samples used in this study were rated as negative and neutral portrayals of stuttering, resulting in “more negative” and “more positive” portrayals of stuttering, respectively. Results indicated that the negative video sample

significantly shifted participants' perceptions of PWS in the negative direction. However, the perceptions of participants who viewed the "more positive" video sample were more positive after viewing the neutral video sample, but the change did not reach statistical significance. It is possible that a significant change in listener perceptions of PWS may have occurred given a statistically positive-rated video sample, rather than a neutral video sample. Therefore, future research should attempt to compile a set of video clips that are rated as positive rather than neutral.

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Appendix A- Video Clip Review Form

Clip Review: Pilot Testing

How was stuttering portrayed in this clip? Circle one.

Very Negatively -----1-----2-----3-----4-----5----- Neutral -----6-----7-----8-----9-----10----- Very Positively

How child appropriate was this clip? Circle one.

G	PG	PG-13	R
all ages may watch	parental guidance is suggested but not restricted	not recommended for a younger audience unless accompanied by an adult	restricted to an older audience

Is this clip appropriate to show to 7th graders? Circle one.

Yes

No: Why?

_____

What would you rate the severity of stuttering in the clip just viewed? Circle one.

None Mild Moderate Severe

Appendix B- Video Samples

Negative Video Sample:
Total Run Time- 12 min. 50 sec.

20 clips taken from 8 motion pictures including:
The King's Speech
A Fish Called Wanda
Rocket Science
Glory
One Flew Over the Cuckoo's Nest
The Last Castle
Primal Fear
The Cowboys
Harry Potter and The Sorcerer's Stone

Clip Name	Pilot Rating 1=Negative 10=Positive	Pilot Testing Motion Picture Rating	Length
King 5	3.580645161	PG	55 sec.
Wanda 5	2.967741935	G	22 sec.
Rocket 1	3.580645161	PG	1 min. 43 sec.
King 15	4.129032258	G	45 sec.
Glory 3	4.290322581	PG	57 sec.
Cuckoo 3	2.967741935	PG	37 sec.
Castle 2	3.677419355	PG	12 sec.
Fear 7	3.322580645	PG	41 sec.
Cowboys 1	1.564516129	PG	42 sec.
King 1	3.064516129	PG	31 sec.
Wanda 6	1.967741935	PG	19 sec.
King 11	1.483870968	PG	38 sec.
Fear 5	2.322580645	PG	19 sec.
Wanda 2	2.532258065	PG	14 sec.
King 9	1.548387097	G	45 sec.
Rocket 3	3.548387097	G	51 sec.
Wanda 1	2.935483871	PG	20 sec.
King 12	3.096774194	G	25 sec.
Harry 3	2	PG	32 sec.
Rocket 4	2.129032258	PG	1 min. 2 sec.

Neutral Video Sample:
Total Run Time- 12 min. 59 sec.

16 clips taken from 10 motion pictures including:
The King's Speech
Primal Fear
The Last Castle
Rocket Science
Men of Honor
Glory
One Flew Over the Cuckoo's Nest
Harry Potter and the Sorcerer's Stone
Space Jam
Enigma

Clip Name	Pilot Rating 1=Negative 10=Positive	Avg. Motion Picture Rating	Length
King 10	5.096774194	G	38 sec.
Fear 1	5.258064516	G	43 sec.
Castle 3	5.35483871	PG	1 min. 40 sec.
Space 1	5.258064516	G	13 sec.
Rocket 6	6.741935484	G	1 min. 18 sec.
King 14	6.838709677	G	1 min 3 sec.
Honor 1	5.774193548	G	27 sec.
Enigma 3	5.516129032	G	9 sec.
King 8	5.483870968	G	1 min. 52 sec.
Rocket 5	5.322580645	G	22 sec.
Honor 3	6.209677419	G	14 sec.
Glory 4	7.129032258	PG	32 sec.
King 4	7.387096774	G	2 min. 13 sec.
Cuckoo 4	6.35483871	G	22 sec.
Rocket 2	6.064516129	G	35 sec.
Harry 1	5.483870968	G	38 sec.

Video Sample Statistics:

Oneway ANOVA mean and standard deviations of the negative and neutral video samples.

	Mean	Standard Deviation	Number of Clips
Negative Sample	2.84	.86	20
Neutral Sample	5.95	.74	16
Total			36

Oneway ANOVA and differences in ratings of the negative and neutral video samples.

	df	F	*p*-value
Between Groups	1	132.88	<.001

Appendix C- Negative Video Sample Transcription & Analysis

The King's Speech

- What on earth do you mean? I'm not here to discuss personal matters. (17)
- Because I bloody well stammer. One of my many faults. (14)
- I've always been this way. Don't tell me, it's my stammer! (13)
- Four or five. So I've been told. I can't remember not doing it. Don't be ridiculous. (22)

Rocket Science

- Nothing. Uh. Uh, not yet. No. a friend. (7)
- Uh um, ah ya, uh can you hold on uh for a second, I'm just gonna move, but uh stay on, (17)
- You can hang up now earl. You can hang up now Earl! (12)
- Um. Uh ya. Every day. Uh ya, I don't think that I've ever heard of it. (12)
- Yeah, oh uh (3) **86**

The King's Speech

- I say that continuously, apparently no one was listening (18)
- Then I'm the solemnest king who ever lived (11)
- You know, if I'm a king, where is my power? (11)
- Can I can I reform a government? (8)
- Can I can I levy a tax? Declare a war? (10)
- No, and yet I'm the seat of all authority. Why? (13)
- Because the nation believes that when I when I speak, I speak for them... well I can't speak. (21)

Glory

- Thank you sir (3)
- Squirrel huntin' (3)
- No sir (2)
- Yes sir (2)

One Flew Over the Cuckoo's Nest

- Well, I went over to her house one Sunday afternoon, and I brought her some flowers. (21) **126**
- I said I said Celia will you marry me. (10)

The Last Castle

- It's all weak. (3)
- My daddy my daddy's a mason. (6)

Primal Fear

- He was like a father to me. (8)
- I loved him very much. (6)
- Why? Well he saved my life and he was the only person who ever treated me like I was worth anything. (27)

The Cowboys

- But I tried to tell you. (6)
- I tried hard. I couldn't get the words out. (10)
- Before God, I tried. (5)

- I'd rather died than done that. It ain't my fault I stutter. (14)

The King's Speech

- I nearly swallowed the bloody things. (9)
- Revenge. (2) **106**

A Fish Called Wanda

- It's Ken coming to kill me. (7*) - imitated stuttering*
- How are you going to catch me, Ken? (9) *–imitated stuttering*
- Now where was I, oh yeah. (6) – *imitated stuttering*

The King's Speech

- Sounds like you haven't (5)
- I'm trying to; don't. (5)

Primal Fear

- We're going to trial Marty (8) – *imitated stuttering*
- I got to admit that face is great, but you prepping him to take the stand, that stutter is priceless. (24) – *imitated stuttering*

A Fish Called Wanda

- Dog (1)
- It's not an (3)

The King's Speech

- Through the wireless one of the marvels of * science (13)
- I am enabled * (5)
- This Christmas day, to speak to all my * (10)

Rocket Science

- Uh good morning there judge, good uh good uh good morning to you uh both, you our esteemed opponents. (18) **114**
- Good morning uh that uh resolved, that uh that uh that it uh, how much time, timer. (9)

A Fish Called Wanda

- Do you want me to get a big car? Get away. (12)

The King's Speech

- In circumstances which are * (7)

Harry Potter and the Sorcerer's Stone

- Ah, yes, does seem the type doesn't he? Well, next to him who would suspect poor stuttering professor Quirell? (25) – *imitated stuttering*
- No dear boy, I tried to kill you. (8) – *imitated stuttering*

Rocket Science

- Oh uh, I have a, its a spring break at Plainsbourough, I have the day off. (15)
- I'm returning this to you, it belongs to you and it's important to me that you have it. It's your Hasslett trophy. I had a bad night but I'm better now. (39)
- Everybody has their own path and ugh… (9) **124**

*** = Blocks**

Syllable Count = 499 Syllables Stuttered = 84 16.8% SS
-Did not count syllables or syllable stuttered when dysfluency was imitated
-Did not count repeated words as new syllables as they were a stutter

Appendix D- Neutral Video Sample Transcription & Analysis

The King's Speech

- Besides you tricked me (5)
- I'm willing to work hard Doctor Logue (9)
- Are you are you are you willing to do your part? (8) because "are you" was the repetition

Primal Fear

- No no sir, no I don't (5)
- Don't, I don't have no money (7)
- No, sir I'd surely be grateful for anything you can do for me (17)

The Last Castle

- I just wanted to say, welcome to the castle sir, good to have you aboard sir (20)
- No no sir, I was in the core (7)
- I was a corporal, yes sir (6)
- Well that's just it, I, I didn't do nothing, it was a mistake (15)
- I, hurt someone, real bad (6)
- Two years (2)
- Four years, eight months, eleven days (8)
- Just one just (2) **117**
- Just five seconds sir; yes sir; yes sir; that was a salute; (14)

Space Jam

- We got an emergency cartoon character you need to go to; hey wait for me wait for – hold your horses; (23)

Rocket Science

- We think our case will state that sex is bound to be explored that adding funds for abstinence is what I will have roared, (27) – *fluency enhancing technique*
- But such a case has been heard so much that we are bored our plan is thus not that (17) – *fluency enhancing technique*
- Our government can best support teaching abstinence by refraining from the common and ugly arrogance (27) – *fluency enhancing technique*
- Instead of telling us we should never do the dance we should adopt this plan (19) – *fluency enhancing technique*
- Amend the constitution so that no one over twenty can serve in government there'll be only kids aplenty (29) – *fluency enhancing technique*
- We'll write the laws and fix sex-ed and it won't cost a penny that's our basic plan (20) – *fluency enhancing technique*
- What we'll what we'll what we'll do is create a new federal government where teenagers are the only the only voices of authority (20)
- By doing so we'll help we'll help create a wider consensus among teens (16)
- It's a more, it's a more, it's a more, it's a more democratic system and democracy is the very basis for love (22) – *fluency enhancing technique*

- As we'll argue below in the rest of my song speech; (13)
- Now please turn to contingent one of our plan (11)

The King's Speech

- I am willing; I solemnly promise to do so (13) **144**
- I solemnly promise to do so; I will; I will;\ (13)
- The things which I have here before promised I will perform and keep, so help me God (20)

Men of Honor

- Don't stare at him. Commanding officer, everyone calls him Mr. Pappy.(19)
- He's a war hero. They were gonna make him an admiral up in DC fore they found out he's got more screws loose than a Studebaker (34)
- So they sent him here. Better salute him or you'll be you'll be spending your first night in the brig (21)

Enigma

- Are we hoping for the U-boats to find the convoys or not? (15)

The King's Speech

- To be or not to be that…Here, can't read (10)
- You're playing music! So how can I hear what I am saying? (14)
- You're not well acquainted with royal princes are you? (13) **159**

Rocket Science

- Korean um yes um just so just so just so that you're that you're aware it's really ignorant to lump us all into one category like that (29)

Men of Honor

- Carl you….they put me back in the diving program. I start training next week. Thanks Carl (20)

Glory

- 'Morrow, we go into battle. (8)
- So Lordy let me fight with a rifle in one hand and good book in the other. (20)
- That if I should die at the muzzle of the rifle. (13)
- Die on water or on land, I may know that you, blessed Jesus almighty are with me. (22)

The King's Speech

- Oh to fly away…. Aren't they lucky. Can't I be a penguin instead….Very quickly….. (21)
- Once there were two princesses, Princess Elizabeth and Princess Margaret, whose papa was a penguin. (25)
- This was because he'd been turned into one by a wicked witch (15)
- This was very inconvenient for him because he loved to hold his princesses in his arms (23) **196**
- But you can't if you're a penguin because you have wings like herrings (16)
- Penguins have wings, which are shaped like herrings (10)

- And what made matters worse is that she sent him to the south pole, which is an awfully long walk back if you can't fly (27)
- So when he reached the water he dived in through the depths so fast that he was in south Hampton waters by lunch time (27)
- And from there he took the two-thirty to Waybridge, changed to clap ham junction, asked a passing mallard the way to Buckingham palace (33)
- Swam up the Themes, out through the plug hole and gave the cook, mama and Mrs. Ritigan quite a shock (24)
- Now when the girls heard all the commotion, they ran to the kitchen where they gave him a good scrub, a mackerel and a kiss. (29)
- And as they kissed him, guess what he turned into? (11)
- A short-tailed Albatross (7)
- With wings so big, that he could wrap them both around his two girls together… (18)

<u>One Flew Over the Cuckoo's Nest</u>

- And you've um got um beautiful hair. And you um got um beautiful eyes (14)

<u>Rocket Science</u>

- Uh well I uh, my plate is kinda full (7)
- No, uh actually I'm waiting for a girl. That girl. (13)

<u>Harry Potter and the Sorcerer's Stone</u>

- Harry Potter, can't tell you how pleased I am to meet you. (13)
- Fearfully fascinating subject, not that you need it eh, Potter. (17) **266**

*** = Blocks**
Syllable Count= 721 Syllables Stuttered= 95 13.2% SS
-Did not count syllables or syllable stuttered when fluency enhancing techniques used
-Did not count repeated words as new syllables as they were a stutter

Appendix E- Copyright Information

1976 Copyright Act (currently at 17 U.S.C. 107) allows others to use copyrighted works to advance and build knowledge without licensing, obtaining permission, or paying fees to copyright owners. In this way students, teachers, and other knowledge-seeking professionals can take "quotations from copyrighted works" under certain conditions (Center for Media & Social Impact, 2005, p. 2). These "certain conditions" are vague and are defined in each individual case using "a rule of reason" (Center for Media & Social Impact, 2005, p. 2). There is a list of favored purposes, four guidelines, and the idea of "good faith" that guide the "rule of reason". On this list of favored purposes is research (Visual Resources Administration, 2015). In fact, "research, teaching, and study are the kinds of not-for-profit, educational uses that are at the core of fair use, as indicated in the language of the statute" (Visual Resources Administration, 2015, p. 4).

The Copyright Act also went on to outline four non-exclusive factors that should be considered and used as a guide for making educated fair use decisions. These four factors include:

> " (1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
>
> (2) the nature of the copyrighted work;
>
> (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
>
> (4) the effect of the use upon the potential market for or value of the copyrighted work." (17 U.S. Code § 107)

A checklist developed by Kenneth Crews (2008), the director of the copyright advisory office at Columbia University, uses legal precedents as a guide for users. The checklist takes users step by step through these four considerations, allowing the user to assess if the use of copyrighted material falls under fair use guidelines. Other guidelines available when deciding if a use is "fair use" are the following questions based on best practices:

> (1) "Did the user employ copyrighted works with a transformative purpose that differs from the original?"
>
> (2) "Did the user employ only as much as necessary for that transformative purpose?"
>
> (Society for Cinema and Media Studies, 2013, pp. 2-3)

Answering yes to both of these questions "is a strong indication that a particular use is fair" (Society for Cinema and Media Studies, 2013, p. 3).

Along with these four factors, fair use is also dependant on whether the user is acting in good faith. Good faith requires that the user is not using the copyrighted work for profit or signifying that the copyrighted work was the user's own work. Research has been deemed a good faith use of copyrighted works (Visual Resources Administration, 2015).

It has also been recently questioned whether "fair use may be asserted in the context of new technologies or media" (Visual Resources Administration, 2015, p. 6). Courts have "repeatedly made clear that – provide the underlying purpose remains the same – the use should remain fair, regardless of the media or technology in which it is employed" (Visual Resources Administration, 2015, p. 6). A user may not break encryption, copy protection, or take clips from an illegally obtained DVD, CD, or copy of the original, but "scholars may legally copy the material through both digital and on-digital means that do not require circumvention of copy protection" (Society for Cinema and Media Studies, 2013, p. 6).

This study was a research thesis conducted in completion of a Master of Art degree at Western Washington University. All copyrighted works used in this research are cited in References with appropriate credit given to the original creators of the works.

The use of copyrighted material in this study was discussed among the researchers and a copyright specialist within the university's library. All individuals came to the conclusion that copyrighted material was used within the guidelines of fair use and good faith. Attached is a copy of the fair use checklist used. After filling out the checklist and taking into account best practices and legal precedents, the use of copyrighted material in this thesis leaned overwhelmingly to being fair use.

Appendix F- Checklist for Fair Use

Fair Use Checklist
Copyright Advisory Office
Columbia University Libraries
Kenneth D. Crews, Director
http://copyright.columbia.edu

Name: Terry Jordea Miller
Institution: Western Washington University
Project: Media Influence on Adolescent Perception of People Who Stutter
Date: 11/09/2015
Prepared by: _____

Purpose

Favoring Fair Use

- ☐ Teaching (including multiple copies for classroom use)
- ☒ Research
- ☐ Scholarship
- ☒ Nonprofit educational institution
- ☐ Criticism
- ☐ Comment
- ☐ News reporting
- ☒ Transformative or productive use (changes the work for new utility)
- ☒ Restricted access (to students or other appropriate group)
- ☐ Parody

Opposing Fair Use

- ☐ Commercial activity
- ☐ Profiting from the use
- ☐ Entertainment
- ☐ Bad-faith behavior
- ☐ Denying credit to original author

Nature

Favoring Fair Use

- ☒ Published work
- ☐ Factual or nonfiction based
- ☒ Important to favored educational objectives

Opposing Fair Use

- ☐ Unpublished work
- ☒ Highly creative work (art, music, novels, films, plays)
- ☒ Fiction

Amount

Favoring Fair Use

- ☒ Small quantity
- ☒ Portion used is not central or significant to entire work
- ☒ Amount is appropriate for favored educational purpose

Opposing Fair Use

- ☐ Large portion or whole work used
- ☐ Portion used is central to or "heart of the work"

Effect

Favoring Fair Use

- ☒ User owns lawfully purchased or acquired copy of original work
- ☐ One or few copies made
- ☒ No significant effect on the market or potential market for copyrighted work
- ☒ No similar product marketed by the copyright holder
- ☐ Lack of licensing mechanism

Opposing Fair Use

- ☐ Could replace sale of copyrighted work
- ☐ Significantly impairs market or potential market for copyrighted work or derivative
- ☐ Reasonably available licensing mechanism for use of the copyrighted work
- ☐ Affordable permission available for using work
- ☐ Numerous copies made
- ☐ You made it accessible on the Web or in other public forum
- ☒ Repeated or long-term use

Most recent revision: 051408

Appendix G- Informed Parental Consent/Participant Assent Form

WESTERN
WASHINGTON UNIVERSITY

An equal opportunity university

Communication Sciences and Disorders
Bellingham, Washington 98225-9171
(360) 650-3881 Fax (360) 650-2843

Parent Consent/Participant Assent Form

The study being conducted is looking at media portrayals of communication disorders. This research will allow the field to gain valuable information about how communication disorders are perceived by adolescents.

Participation in this experiment will involve completing an assent form, a demographic info sheet, watching video clips from motion pictures and completing a pre- and post-video questionnaire regarding attitudes towards certain speech production characteristics. The clips will be approximately 15 minutes in length. Clips are taken from major motion pictures and do not contain explicit language, nudity, or graphic violence. All clips have been prescreened by graduate students and were deemed child appropriate with a rating of PG or lower. Together, it is estimated that watching the clips and completing the questionnaire will take 20-30 minutes.

The following safeguards are assured to protect participant confidentiality. Names will not appear anywhere in the study itself or on the demographic info sheet and questionnaire. Signed consent forms, assent forms, demographic information sheets, and all completed questionnaires will be kept in a locked filing cabinet when not in use by the researchers. Consent and assent forms will be kept separately from the questionnaire and demographic information sheets to maintain anonymity.

We do not expect any risks related to participation in this study. One potential benefit is that participants may have a better understanding of the research process in social science studies and a greater awareness of communication disorders. The researcher will also be offering compensation for participation in the study, consisting of an incentive item that is less than $1.00 in value.

Participation is voluntary. Participants may withdraw from the study or choose not to answer certain questions without any penalty. Signing this form does not waive the participant's legal rights of protection. If there are any questions about participation or rights as a research participant, please contact the WWU Human Protections Administrator (HPA) at (360) 650-3220 or Dr. David Evans, the researcher supervising the study, at david.evans@wwu.edu. If during or after participation in this study there any adverse effects as a result of participation, please notify the researcher directing the study, Tad Miller, at mille358@students.wwu.edu or the WWU Research Compliance Officer Janai Symons at (360) 650-3082.

I agree to participate ____

_____	_____	_____
Participant's SIGNITURE	Participant's PRINTED NAME	Date

I agree to permit my child to participate in this study ____

_____	_____	_____
Parent's SIGNITURE	Parent's PRINTED NAME	Date

NOTE: Please sign both copies of the form and retain the copy marked "Participant Copy". You can return this form by sending it to school with your child or by mailing it to the researchers using the provided pre-paid envelope.

Appendix H- Parent Information Letters

WESTERN
WASHINGTON UNIVERSITY

An equal opportunity university

Communication Sciences and Disorders
Bellingham, Washington 98225-9171
(360) 650-3881 Fax (360) 650-2843

Dear Ferrucci Parents,

My name is Tad Miller. I am currently working on my Masters in Speech Pathology at Western Washington University and to supplement my education I am conducting research. I would like to provide you with a brief overview of what my study is and what participation will involve. My study is focused on media portrayals of stuttering and participation in this study will take about 20-30 minutes. Everyone will watch a few clips and fill out a questionnaire afterwards. I also want to assure you that all student information will be confidential and no identifying information besides group statistics for age, gender, and grade level will appear in the research.
I am excited to be working with Mr. Leifsen to provide this exciting and unique opportunity to the current students at Ferrucci. I believe that participating in this study will provide a valuable experience, demonstrating that not all research is test tubes or intense, long-term case studies. There are multiple forms of research in every field and every student is capable of creating a study that is interesting and beneficial to whatever field he or she chooses to enter!
I am very excited about this opportunity, as is Mr. Leifsen:

As principal of Ferrucci, it is my belief that students must be prepared for opportunities for post-secondary education. Part of that preparation is exposure to students who are currently taking advantage of such opportunities. Having worked with Ms. Miller as a junior high student I can attest to the fact that she is a student who is focused, driven, and carries with her the utmost professional and scholastic integrity. I'm thrilled that our students will have the opportunity to participate in this study, and additionally will have the opportunity to hear about options they have once they leave this building. This research project and process has been reviewed by the university, and myself and has my full support. I hope you will support your child in this activity without reservation. If you have questions or concerns, please do not hesitate to contact me.

Sincerely,
Tad Miller and Steve Leifsen

WESTERN
WASHINGTON UNIVERSITY

An equal opportunity university

Communication Sciences and Disorders
Bellingham, Washington 98225-9171
(360) 650-3881 Fax (360) 650-2843

Dear Glacier View Parents,

My name is Tad Miller. I am currently working on my Masters degree in Speech-Language Pathology at Western Washington University. In partial fulfillment of my degree I have elected to complete a university approved research study under the guidance of my faculty advisor Dr. David Evans. This letter will provide you with a brief overview of my study and how your child may participate. My study is focused on media portrayals of communication disorders and participation in this study will take about 20-30 minutes in one of your child's classes. All students in the class who volunteer to participate will watch a few video clips and complete a questionnaire about how they perceive the speakers in the video clips. If your child does not participate they will be taken to a supervised area to wait while the study in being conducted in the classroom. All student information will be confidential and no identifying information besides group statistics for age, gender, and grade level will appear in the research.

The only documentation with your name or your child's name will include the parental consent and child assent forms and these will be kept in a locked file cabinet when not in use by the researchers. Consent and assent forms will be kept separately from the questionnaire and demographic information sheets to maintain anonymity.

I believe that participating in this study will provide a valuable experience, demonstrating that not all research is conducted in a laboratory with test tubes or intense, long-term case studies. There are multiple forms of research in every field and every student is capable of creating a study that is interesting and beneficial to whatever field he or she chooses to enter!

I am very excited about this opportunity, as is Mr. Casello:

As principal of Glacier View, it is my belief that students must be prepared for opportunities for post-secondary education. Part of that preparation is exposure to students who are currently taking advantage of such opportunities. Ms. Miller is a student who is focused, driven, and carries with her the utmost professional and scholastic integrity. I'm thrilled that our students will have the opportunity to participate in this study, and additionally will have the opportunity to hear about options they have once they leave this building. This research project and process has been reviewed by the university, and myself and has my full support. I hope you will support your child in this activity without reservation. If you have questions or concerns, please do not hesitate to contact me.

Sincerely,
Tad Miller and Mario Casello

Appendix I- HSRC Approval

WESTERN WASHINGTON UNIVERSITY

HUMAN SUBJECTS REVIEW COMMITTEE

APPROVAL FOR USE OF HUMAN SUBJECTS

TYPE OF REQUEST: ☒ new ☐ continuation ☐ modification

PROTOCOL NUMBER: 15-012

INVESTIGATOR(S): David Evans & Terylandrea Miller

DEPARTMENT: CSD

PROJECT TITLE:

Media Influence on Adolescent Perceptions of People Who Stutter

APPROVAL PERIOD: 11/19/2014 –11/18/2015

NUMBER OF SUBJECTS: unknown

APPROVED INFORMED CONSENT FORM ATTACHED: ☒ Yes ☐ No

Approved by Lori Symons Date 11/20/14
Human Subjects Review Committee

Comments:

Note: Approval is for the period specified above. A protocol renewal form will be sent to you prior to the expiration of this approval period. If there are any adverse events or changes in the research procedures affecting the use of human subjects in this project during the current period, the HSRC must be notified immediately.

DUE DATE: _____

APPROVED
BY HSRC
DATE 11/19/14

WESTERN
WASHINGTON UNIVERSITY

An equal opportunity university

Communication Sciences and Disorders
Bellingham, Washington 98225-9171
(360) 650-3881 Fax (360) 650-2843

Parent Consent/ Participant Assent Form

The study being conducted is looking at media portrayals of communication disorders. This research will allow the field to gain valuable information about how communication disorders are perceived by adolescents.

Participation in this experiment will involve completing an assent form, a demographic info sheet, watching video clips from motion pictures and completing a pre- and post-video questionnaire regarding attitudes towards certain speech production characteristics. The clips will be approximately 15 minutes in length. Clips are taken from major motion pictures and do not contain explicit language, nudity, or graphic violence. All clips have been prescreened by graduate students and were deemed child appropriate with a rating of PG or lower. Together, it is estimated that watching the clips and completing the questionnaire will take 20-30 minutes.

The following safeguards are assured to protect participant confidentiality. Names will not appear anywhere in the study itself or on the demographic info sheet and questionnaire. Signed consent forms, assent forms, demographic information sheets, and all completed questionnaires will be kept in a locked filing cabinet when not in use by the researchers. Consent and assent forms will be kept separately from the questionnaire and demographic information sheets to maintain anonymity.

We do not expect any risks related to participation in this study. One potential benefit is that participants may have a better understanding of the research process in social science studies and a greater awareness of communication disorders. The researcher will also be offering compensation for participation in the study, consisting of an incentive item that is less than $1.00 in value.

Participation is voluntary. Participants may withdraw from the study or choose not to answer certain questions without any penalty. Signing this form does not waive the participant's legal rights of protection. If there are any questions about participation or rights as a research participant, please contact the WWU Human Protections Administrator (HPA) at (360) 650-3220 or Dr. David Evans, the researcher supervising the study, at david.evans@wwu.edu. If during or after participation in this study there any adverse effects as a result of participation, please notify the researcher directing the study, Tad Miller, at mille358@students.wwu.edu or the WWU Research Compliance Officer Janai Symons at (360) 650-3082.

I agree to participate ____

_____	_____	_____
Participant's SIGNITURE	Participant's PRINTED NAME	Date

I agree to permit my child to participate in this study ____

_____	_____	_____
Parent's SIGNITURE	Parent's PRINTED NAME	Date

NOTE: Please sign both copies of the form and retain the copy marked "Participant Copy". You can return this form by sending it to school with your child or by mailing it to the researchers using the provided pre-paid envelope.

Researcher Copy

Appendix J- Demographic Information Form

Gender: ____ Male ____ Female

Age: ____

Grade: ____

Ethnicity:

____ Caucasian ____ Native American

____ African-American ____ Hispanic

____ Asian ____ Pacific Islander

____ Other: please specify _____

Is English your primary language? ____ No ____ Yes

Do you, a family member, or close friend have a speech disorder?

____ No

____ Yes: please describe _____

Do you currently receive speech or language services from a speech therapist?

____ No

____ Yes: please describe _____

Do you have a visual impairment that is not corrected? ____ No ____ Yes

Do you have a hearing impairment? ____ No ____ Yes

Appendix K- Instructions

1. Please leave packets face down on your desk until everyone has a packet.
2. When you fill out these forms you can use a pen or a pencil.
3. Turn over your packet, look at your Subject #, copy that number onto the Subject # line on each page in your packet.
4. Please find the first form in your packet. It should have numbers down the front and nothing written on the back.
5. Let's do the first question together to make sure we all know how the number scale works. Our first statement says 'Superheroes are…' if you think superheroes are really strong you will mark which number? If you think superheroes are really weak you will mark which number? So do you all think superheroes really strong or really weak? Okay mark your answers.
6. Please continue to fill out the rest of the statements marking how much you agree with the statement 'People who stutter are….' Stuttering is a speech dysfluency that includes sound and repetitions as well as hesitations or blocks during speech. A list of other definitions is provided for you to refer to if needed.

7. Is everyone done?
8. I am now going to show you a series of clips, just watch, you won't be quizzed on this information later. Do not remark any answers on your survey, you will get a chance to fill out another survey after viewing the video clips.

9. Now please find the form with numbers on the front and three questions on the back. Please fill out all questions on this form. Again you can refer to the definitions list if needed. One question asks about 'severity', all that means is how much stuttering did you see in the clips you viewed. If you thought there was a lot of stuttering you might mark severe, if you thought there wasn't too much stuttering you might mark mild.
10. When you are done filling out the survey, please fill out the information form, the last paper in your packet, it will ask for your age, grade, etc. Caucasian means white, or of European descent.
11. Once you have completed all the forms in your packet please clip them back together and bring them to me.

Appendix L- Definitions Sheet

Definitions

Competent- Qualified; can do what is needed
Incompetent- Not qualified; cannot do what is needed

Friendly- Nice to others; kind
Unfriendly- Mean; hard to get along with

Intelligent- Very smart; bright
Stupid- Not smart; slow to learn or understand

Brave- Fearless; not afraid; daring
Afraid- Frightened; filled with fear

Credible- Able to be believed
Not Credible- Not able to be believed

Relaxed- Loose; easy-going; at ease
Tense- Showing tension; tight; stiff; anxious

Confident- Sure; certain or sure of your abilities
Unsure- Not confident; uncertain

Sharp- Quick thinker; clever; amusing
Dull- Not interesting; boring

Good Sense of Humor- Able to see or express what is funny or amusing
Poor Sense of Humor- Not able to see or express what is funny or amusing

Not Impaired- Not handicapped; having few faults
Impaired- Handicapped; being less than perfect

Understandable- Clear; know what is said; able to get the meaning
Not Understandable- Not clear; don't know what is said; not able to get the meaning

Outgoing- Extroverted; friendly
Shy- Timid; not at ease with other people

Appendix M- Pre-Survey

Superheroes are:

Weak	1	2	3	4	5	6	7	Strong

People who stutter are: (please circle one)

Dull	1	2	3	4	5	6	7	Sharp
Not Credible	1	2	3	4	5	6	7	Credible
Stupid	1	2	3	4	5	6	7	Intelligent
Incompetent	1	2	3	4	5	6	7	Competent
Impaired	1	2	3	4	5	6	7	Not Impaired
Not Understandable	1	2	3	4	5	6	7	Understandable
Tense	1	2	3	4	5	6	7	Relaxed
Unsure	1	2	3	4	5	6	7	Confident
Shy	1	2	3	4	5	6	7	Outgoing
Afraid	1	2	3	4	5	6	7	Brave
Unfriendly	1	2	3	4	5	6	7	Friendly
Poor Sense of Humor	1	2	3	4	5	6	7	Good Sense of Humor

Appendix N- Post-Survey

People who stutter are: (please circle one)

Dull	1	2	3	4	5	6	7	Sharp
Not Credible	1	2	3	4	5	6	7	Credible
Stupid	1	2	3	4	5	6	7	Intelligent
Incompetent	1	2	3	4	5	6	7	Competent
Impaired	1	2	3	4	5	6	7	Not Impaired
Not Understandable	1	2	3	4	5	6	7	Understandable
Tense	1	2	3	4	5	6	7	Relaxed
Unsure	1	2	3	4	5	6	7	Confident
Shy	1	2	3	4	5	6	7	Outgoing
Afraid	1	2	3	4	5	6	7	Brave
Unfriendly	1	2	3	4	5	6	7	Friendly
Poor Sense of Humor	1	2	3	4	5	6	7	Good Sense of Humor

TURN THE PAGE OVER

How was stuttering portrayed in the video sample you just viewed? Circle one.

Very Negativly					Neutral					Very Positively
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	

Rate the severity of stuttering in the video sample you just viewed? Circle one.

None Mild Moderate Severe

Were you able to see and hear the video sample being presented? Circle one.

Yes No

Appendix O- Participant Characteristics

Table 6

Participant grade and video presentation sample

Grade	Negative Sample	Neutral Sample	Total
7th	36	31	67
8th	45	31	76
9th	19	38	57
Participants per Sample	100	100	200

Table 7

Participant gender and video presentation sample

Gender	Negative Sample	Neutral Sample	Total
Male	50	50	100
Female	50	50	100
Participants per Sample	100	100	200

Table 8

Age and video presentation samples

Age	Negative Sample	Neutral Sample	Total
12	25	21	46
13	41	22	63
14	24	41	65
15	10	16	26
Participants per Sample	100	100	200

Table 9

Participant ethnicity

Ethnicity	Frequency	Percent
Caucasian	129	64.50
African-American	13	6.50
Asian	18	9.00
Native American	10	5.00
Hispanic	14	7.00
Pacific Islander	12	6.00
Other	4	2.00
Total	200	100